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Volume 104

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**USAF BIOENVIRONMENTAL NOISE DATA HANDBOOK**

Volume 104.

A/M32A-60A Generator Set and A/M32C-10 Air  
Conditioner, Combined Unit Operation

9 Technical rpt.,

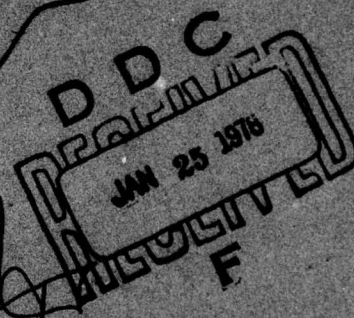
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This technical report has been reviewed and is approved for publication.

**FOR THE COMMANDER**

  
HENNING E. VON GIERKE  
Director  
Biodynamics and Bionics Division  
Aerospace Medical Research Laboratory

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) ➤ The A/M32A-60A Generator Set is a gas turbine engine driven source of electrical power with pneumatic capability. The A/M32C-10 Air Conditioner is a pneumatic-driven air conditioner designed to provide conditioned air to the aircraft's interior during ground servicing. This report provides measured and extrapolated data defining the bioacoustic environments produced by these two units simultaneously operated as a unit outdoors on a concrete apron at normal rated/loaded conditions. Near-field data are reported for 72 locations in a		

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wide variety of physical and psychoacoustic measures: overall and band sound pressure levels, C-weighted and A-weighted sound levels, preferred speech interference level, perceived noise level, and limiting times for total daily exposure of personnel with and without standard Air Force ear protectors. Far-field data measured at 36 locations are normalized to standard meteorological conditions and extrapolated from 20-3000 meters to derive sets of equal-value contours for these same seven acoustic measures as functions of angle and distance from the source. Refer to Volume 1 of this handbook, *USAF Bioenvironmental Noise Data Handbook, Vol 1: Organization, Content and Application*, AMRL-TR-75-50(1) 1975, for discussion of the objective and design of the handbook, the types of data presented, measurement procedures, instrumentation, data processing, definitions of quantities, symbols, equations, applications, limitations, etc. ↑



## PREFACE

This report was prepared by the Biodynamic Environment Branch, Aerospace Medical Research Laboratory, under Project/Task 723104, Measurement and Prediction of Noise Environments of Air Force Operations.

The author acknowledges the efforts of Mr. Robert G. Powell and Mr. Robert A. Lee who assisted in conducting the field measurements, and Mr. John N. Cole who established the data analysis requirements and assisted in the preparation of this report. Mr. Henry Mohlman and Mr. David Eilerman of the University of Dayton assisted in the mechanics of data processing, and Mrs. Norma Peachey and Mr. Mike Patterson typed and prepared the graphics.

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## INTRODUCTION

The A/M32A-60A Generator Set, which is manufactured by the HOL-GAR Manufacturing Corporation, is a gas turbine engine-driven source of electric power. This unit also provides pneumatic power to drive the A/M32C-10 Air Conditioner, manufactured by United Aircraft Products, Inc., providing conditioned air to an aircraft's interior during ground servicing.

This volume provides measured and extrapolated data defining the bioacoustic environments produced by these units. Such data are essential to evaluate ear protection requirements, limiting personnel exposure times, voice communication capabilities, and annoyance problems associated with the combined simultaneous operation of the A/M32A-60A generator set and the A/M32C-10 air conditioner.

This volume is one of a series published by the Aerospace Medical Research Laboratory (AMRL) under the same report number (AMRL-TR-75-50) as a multi-volume handbook that quantifies the noise environments produced at flight/ground crew locations and in surrounding communities by operations of Air Force aircraft and ground support equipment. The far-field, community-type, noise data in the handbook described the noise produced during *ground operations* of aircraft, ground equipment, and other ground-based equipment or facilities.

Volume 1 of this handbook discusses the objectives and design of the handbook, the types of data presented, measurement procedures, instrumentation, data processing, definitions of quantities, symbols, equations, applications, limitations, etc. Volume 2 provides a method and data for adjusting the handbook's far-field noise data, which are for standard meteorological conditions (15C temperature, 70% rel humidity, 0.760 meters Hg barometric pressure) to derive comparable data for other meteorological conditions. Refer to *Volumes 1 and 2* (references 1 and 2) for such information because it is not repeated in other handbook volumes.

A cumulative index lists those aerospace systems contained in the handbook, and identifies the specific volumes containing each type of environmental noise data available (i.e., inflight/flight crew and passenger noise, near-field/ground crew noise, far-field/community noise). Volume numbers are assigned sequentially as individual volumes are published. This index is periodically updated as individual volumes are published, and is available upon request from AMRL/BBE, Wright-Patterson AFB, OH 45433. Organizations on the distribution list for the handbook will automatically receive a copy of the updated index as it is generated.

Direct any questions concerning the technical data in this report and other handbook volumes to: AMRL/BBE, Wright-Patterson AFB, OH 45433; Autovon 78-53675 or 78-53664; Commercial (513) 255-3675 or (513) 255-3664.

1. Cole, John N., *USAF Bioenvironmental Noise Data Handbook, Volume 1: Organization, Content and Application*, AMRL-TR-75-50 (1), Aerospace Medical Research Laboratory, Wright-Patterson Air Force Base, Ohio, 1975.
2. Cole, John N., *USAF Bioenvironmental Noise Data Handbook, Volume 2: Procedure to Evaluate Effects of Non-standard Meteorological Conditions on Far-Field Noise*, AMRL-TR-75-50 (2), AMRL, WPAFB, OH, 1975.



## NEAR-FIELD NOISE

### MEASUREMENTS

A standard A/M32A-60A Generator Set and a standard A/M32C-10 Air Conditioner (being driven by the generator) were simultaneously operated outdoors on a concrete apron at normal rated conditions. The generator set was loaded at 100 amp, 240 volts AC, 3 phase by an M24T-8 load bank, supplying 40 PSI air to drive the air conditioner, which had an output of 40 lb/min. No significant sound-reflective surfaces were present except the ground plane. The load bank was physically located so as to not interfere with the two unit's noise field. Table 1 notes the surface meteorological conditions at the time of measurement.

Figure 1 identifies 108 noise measurement locations at a height of 1.5 meters above the concrete apron (nominal ear level of ground crew). The 0 degree reference direction passes through the tow bar. The 72 locations on the four inner circles are in the acoustic near-field of the source where the sound wave fronts generally do not spherically diverge and the source appears to be spatially distributed (i.e., not a point source). Consequently, these near-field data cannot be extrapolated to longer distances but do properly define the levels at locations close to the unit.

Table 1 lists the alphabetic designator used on the data pages in this report to identify the test condition. The designator A means test condition A. Such a descriptor is essential in many handbook volumes that involve multiple combinations of location/conditions. It is used in this report to maintain format consistency.

### RESULTS

The measured data presented in Tables 2 and 4 define the sound pressure levels (SPL) produced by the simultaneous operation of the A/M32A-60A and the A/M32C-10 units respectively at the 72 specified, near-field locations. This table includes the overall, 1/3 octave band, and octave band levels. From these data one can calculate the variety of measures in Tables 3 and 5 which are widely used to assess the effects of noise on personnel and their performance.

For data at other intermediate near-field locations (i.e., for radial distances less than 20 meters) you can interpolate between the 108 measured data points. All near-field data are for the meteorological conditions at the time of test but are valid for all typical airbase meteorology because of the short distances over which the sound is propagated.

TABLE 1

#### TEST CONDITION FOR NOISE MEASUREMENTS

Edwards AFB, 3 June 1975

A/M32A-60A Generator Set, Gas Turbine Engine Driven  
FSN 6115-420-8486, Mfr. Part # 69E39110, and

A/M32C-10 Air Conditioner  
FSN 4120-196-5252, Mfr. Part # UA532888-1

#### Operation

A	Generator loaded at 100 amp, 240 VAC, 3 phase by M24T-8 load bank and supplying 40 PSI air to drive the air conditioner whose output is 40 lb/min.
---	---

#### Meteorology

Temperature	29 C
Bar Pressure	0.693 M Hg
Rel Humidity	24 %

## **FAR-FIELD NOISE**

### **MEASUREMENTS**

Noise measurements were also made on the same A/M32A-60A and A/M32C-10 units under the same test conditions at the outer circle locations on Figure 1. These 36 locations are assumed to be in the acoustic far-field of the source where the sound wave fronts spherically diverge and the unit may be regarded as a point noise source. Under these far-field conditions, the measured data can be extrapolated to longer distances.

### **RESULTS**

Table 6 lists the overall and 1/3 octave band SPL measured at the 36 far-field locations under the meteorological conditions at the time of test. These data were normalized to 30 meters distance and standard meteorological conditions (15C temperature, 70% rel humidity, 0.760 meter Hg barometric pressure) and used to derive the graphic data in Figure 2 which provides a compact summary of the far-field noise characteristics of the two simultaneously operating units.

These measured data were also used to derive sets of equal noise contours (Figures 3 through 9) describing seven different measures of noise as functions of angle and distance from the source for standard day meteorology. Note that Figure 8 contours identify limiting exposure time for personnel. Missing data points on any of the contours are the result of eliminating measured data which contained excessive influence of spurious background noise present at the time of measurement. In some cases, contour levels at these missing data points were estimated and indicated with dashed lines.

Volume 2 of the handbook defines the influence of meteorology on far-field noise environments and provides, if required, the factors necessary to adjust the handbook standard meteorological day data.



TABLE: MEASURED SOUND PRESSURE LEVEL (DB)										IDENTIFICATION:									
2 1/3 OCTAVE BAND																			
NOISE SOURCE/SUBJECT:																			
( OPERATION:																			
A/M32A-60A GENERATOR SET ( GEN LOADED 100AMP, 240VAC )																			
AND A/M32C-10 AIR COND. ( 3PH, 8Y M24T-8 LOAD BANK, )																			
COMBINED UNIT OPERATION ( 40 PSI AIR TO A/M32C-10, )																			
NEAR FIELD NOISE LEVELS ( AC AIR OUTPUT 40 LBS/MIN )																			
DISTANCE (M)-->																			
ANGLE (DEG)-->																			
CONDITION----->																			
FREQ (HZ)	4	8	16	32	64	128	256	512	1024	2048	4096	8192	16384	32768	65536	131072	262144	524288	1048576
25	85<	90	86<	83<	83<	83<	83<	83<	83<	83<	83<	83<	83<	83<	83<	83<	83<	83<	83<
31.5	84<	86<	86<	84<	84<	84<	84<	84<	84<	84<	84<	84<	84<	84<	84<	84<	84<	84<	84<
40	85<	85<	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87
50	87	88	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89
63	93	92	94	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93
80	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96
100	93	90	90	94	91	90	90	90	90	90	90	90	90	90	90	90	90	90	90
125	93	90	90	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87
160	92	91	87	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89
200	92	93	91	90	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91
250	97	96	95	94	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96
315	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
400	93	94	94	92	90	88	88	88	88	88	88	88	88	88	88	88	88	88	88
500	90	95	92	88	86	85	85	85	85	85	85	85	85	85	85	85	85	85	85
630	91	91	90	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86
800	88	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87
1000	83	82	84	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86
1250	85	82	84	83	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81
1600	83	83	83	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81
2000	87	85	85	93	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
2500	87	90	87	85	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82
3150	87	90	89	85	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
4000	88	90	88	86	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
5000	93	87	86	82	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81
6300	87	85	83	81	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79
8000	84	82	83	79	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78
10000	88	90	88	84	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
OVERALL	107	106	106	105	104	103	103	103	103	103	103	103	103	103	103	103	103	103	103

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.



TABLE: MEASURED SOUND PRESSURE LEVEL (DB)										IDENTIFICATION:										
2 1/3 OCTAVE BAND										OMEGA 3.2										
NOISE SOURCE/SUBJECT: ( OPERATION: )										TEST 75-030-001										
A/M32A-60A GENERATOR SET ( GEN LOADED 100AMP, 240VAC )										RUN 02										
AND A/M32C-10 AIR COND. ( 3PH, BY M24T-8 LOAD BANK, )										16 OCT 75										
COMBINED UNIT OPERATION ( 40 PSI AIR TO A/M32C-10, )										PAGE F2										
NEAR FIELD NOISE LEVELS ( AC AIR OUTPUT 40 LBS/MIN )																				
FREQ (HZ)	DISTANCE (M)-->		ANGLE (DEG)-->		200		300		400		500		600		700		800		900	
	CONDITION----->		A		A		A		A		A		A		A		A		A	
25	83<		81<		88<		81<		91		89		85<		88<		90		86<	
31.5	82<		82<		85<		82<		85<		89		86<		87		90		88	
40	84<		82<		85<		82<		87		88		86<		87		90		90	
50	86		87		88		85		88		95		92		91		92		91	
63	90		90		91		93		91		95		97		96		94		95	
80	93		95		96		96		97		98		97		96		93		94	
100	88		91		96		96		98		96		95		93		91		93	
125	90		91		89		90		93		93		93		96		96		96	
160	90		95		95		93		92		97		97		99		99		101	
200	91		89		90		91		92		96		96		98		99		99	
250	95		95		95		96		97		101		99		97		96		96	
315	95		95		96		99		100		103		102		100		97		97	
400	84		86		88		91		93		102		100		99		96		94	
500	89		85		87		90		92		101		101		99		95		93	
630	87		88		90		91		90		96		96		95		92		88	
800	88		87		90		92		88		93		93		92		90		90	
1000	82		83		85		87		86		87		85		86		87		88	
1250	81		80		79		82		84		87		87		86		85		86	
1600	79		77		79		79		79		82		85		85		82		83	
2000	79		79		81		86		88		86		92		89		84		83	
2500	79		80		80		85		87		88		90		88		82		83	
3150	81		82		84		85		87		91		91		92		86		85	
4000	81		82		83		84		88		91		91		89		87		87	
5000	82		82		82		86		85		88		91		90		85		85	
6300	82		80		81		83		88		88		88		87		85		86	
8000	79		79		80		81		83		88		87		84		84		86	
10000	81		82		83		85		87		92		92		88		89		89	
OVERALL	102		103		104		105		106		110		109		108		107		108	

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: MEASURED SOUND PRESSURE LEVEL (DB)										IDENTIFICATION:	
2										OMEGA 3.2	
										TEST 75-030-001	
										RUN 03	
										10 OCT 75	
										PAGE F3	
NOISE SOURCE/SUBJECT: ( OPERATION: )											
A/M32A-60A GENERATOR SET ( GEN LOADED 100AMP, 240VAC )											
AND A/M32C-10 AIR COND. ( 3PH, BY M24T-8 LOAD BANK, )											
COMBINED UNIT OPERATION ( 40 PSI AIR TO A/M32C-10, )											
NEAR FIELD NOISE LEVELS ( AC AIR OUTPUT 40 LBS/MIN )											
FREQ (HZ)	DISTANCE (M)-->	2	2	2	2	2	2	2	2	2	2
ANGLE (DEG)-->	160	180	200	220	240	260	280	300	320	340	
CONDITION----->	A	A	A	A	A	A	A	A	A	A	
25	93	87<	88<	86<	85<	83<	83<	83<	85<	86<	
31.5	90	87	89	85<	84<	82<	82<	82<	85<	86<	
40	93	90	90	88	87	87	86<	87	85<	88	
50	93	91	91	89	89	91	88	88	89	92	
63	97	95	93	91	92	93	93	93	96	96	
80	98	96	94	92	91	93	93	95	96	97	
100	96	94	94	93	93	93	90	93	93	94	
125	100	101	99	96	95	96	96	94	93	93	
160	103	104	103	102	101	99	99	101	97	96	
200	103	104	102	100	99	99	100	99	99	98	
250	107	106	105	100	98	96	96	99	98	99	
315	104	106	104	99	97	96	97	96	99	102	
400	102	103	101	94	92	90	93	95	97	99	
500	101	103	99	93	93	92	93	94	96	99	
630	94	99	93	92	92	94	93	93	92	93	
800	90	93	96	92	92	93	93	94	95	92	
1000	88	89	93	89	88	87	85	88	91	90	
1250	89	89	88	85	84	84	84	82	85	88	
1600	87	86	84	84	82	82	82	83	82	86	
2000	86	85	84	83	85	82	82	87	90	88	
2500	84	87	84	82	83	83	83	86	87	88	
3150	89	91	89	87	87	89	88	89	88	90	
4000	90	93	91	87	88	90	88	88	92	91	
5000	88	90	90	88	88	87	85	85	88	91	
6300	88	91	92	89	88	88	85	85	87	89	
8000	88	90	90	88	87	87	85	85	86	88	
10000	90	90	90	89	90	88	88	90	91	92	
OVERALL	112	113	111	108	107	107	107	107	108	109	

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.



[illegible]



TABLE: MEASURED SOUND PRESSURE LEVEL (DB)													
2													
OCTAVE BAND													
IDENTIFICATION:													
NOISE SOURCE/SUBJECT:													
A/M32A-60A GENERATOR SET													
AND A/M32C-18 AIR COND.													
COMBINED UNIT OPERATION													
NEAR FIELD NOISE LEVELS													
OPERATION:													
GEN LOADED 100AMP, 240VAC													
3PH, 8Y M24T-8 LOAD BANK,													
40 PSI AIR TO A/M32C-10,													
AC AIR OUTPUT 40 LBS/MIN													
PAGE J2													
OMEGA 3.2													
TEST 75-030-001													
RUN 82													
10 OCT 75													
DISTANCE (M)-->													
ANGLE (DEG)-->													
CONDITION----													
FREQ (HZ)	4	4	4	4	4	4	4	4	4	4	4	4	4
31.5	88	87	91	87	93	93	91	91	92	92	94	93	95
63	95	96	97	98	99	100	100	101	99	98	98	98	99
125	94	97	99	98	100	100	100	100	100	101	101	102	104
250	98	98	99	101	102	106	104	103	103	102	102	103	106
500	91	91	93	95	96	105	104	103	101	99	97	97	99
1000	90	89	91	93	91	95	94	93	93	93	92	93	94
2000	84	83	85	89	91	91	94	93	95	91	87	87	87
4000	86	87	87	90	92	95	96	96	93	91	90	91	91
8000	86	85	86	88	89	94	94	94	91	91	91	92	92
OVERALL	102	103	104	105	106	110	109	108	108	107	107	108	109

TABLE: MEASURED SOUND PRESSURE LEVEL (DB)										IDENTIFICATION:	
2											
NOISE SOURCE/SUBJECT:											
( OPERATION:											
A/M32A-60A GENERATOR SET ( GEN LOADED 100AMP, 240VAC )											
AND A/M32C-10 AIR COND. ( 3PH, BY M24T-8 LOAD BANK, )											
COMBINED UNIT OPERATION ( 40 PSI AIR TO A/M32C-10, )											
NEAR FIELD NOISE LEVELS ( AC AIR OUTPUT 40 LBS/MIN )											
DISTANCE (M)-->											
ANGLE (DEG)-->											
CONDITION----											
FREQ	2	2	2	2	2	2	2	2	2	2	2
(HZ)	160	180	200	220	240	260	280	300	320	340	
	A	A	A	A	A	A	A	A	A	A	
31.5	96	93	94	91	90	89	89	89	90	92	
63	101	99	98	95	95	97	96	97	99	100	
125	105	106	105	103	102	101	101	102	100	99	
250	109	110	108	104	103	102	103	103	103	105	
500	105	107	103	98	97	97	98	99	100	102	
1000	94	95	98	96	94	94	94	95	96	95	
2000	90	91	88	88	89	87	87	90	92	92	
4000	94	96	95	92	92	93	92	92	94	95	
8000	94	95	95	94	93	92	91	92	93	94	
OVERALL	112	113	111	108	107	107	107	107	108	109	



TABLE: MEASURES OF HUMAN NOISE EXPOSURE														IDENTIFICATION:	
3														OMEGA 3.2	
NOISE SOURCE/SUBJECT: ( OPERATION: )														TEST 75-030-001	
A/M32A-60A GENERATOR SET ( GEN LOADED 100AMP, 240VAC )														RUN 81	
AND A/M32C-10 AIR COND. ( 3PH, BY M24T-8 LOAD BANK, )														10 OCT 75	
COMBINED UNIT OPERATION ( 40 PSI AIR TO A/M32C-10, )														PAGE M1	
NEAR FIELD NOISE LEVELS ( AC AIR OUTPUT 40 LBS/MIN )															
HAZARD/PROTECTION															
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DB) AT EAR															
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DB) AT EAR															
MAXIMUM PERMISSIBLE TIME (T IN MINUTES) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)															
NO PROTECTION															
OASLC															
OASLA															
MINIMUM QPL EAR MUFFS															
OASLA*															
T															
AMERICAN OPTICAL 1700 EAR MUFFS															
OASLA*															
T															
V-51R EAR PLUGS															
OASLA*															
T															
AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS															
OASLA*															
T															
H-133 GROUND COMMUNICATION UNIT															
OASLA*															
T															
COMMUNICATION															
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)															
PSIL															
ANNOUNCE															
PERCEIVED NOISE LEVEL, TONE CORRECTED (PMLT IN PND8)															
TONE CORRECTION (C IN DB)															
PMLT															
C															
* BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE.															

3

3

TABLE 1 MEASURES OF HUMAN NOISE EXPOSURE										IDENTIFICATION
3										
NOISE SOURCE/SUBJECT: ( OPERATION: )										
A/M32A-60A GENERATOR SET ( GEN LOADED 100AMP, 240VAC )										
AND A/M32G-10 AIR COND. ( 3PH, 8Y M24T-8 LOAD BANK, )										
COMBINED UNIT OPERATION ( 40 PSI AIR TO A/M32C-10, )										
NEAR FIELD NOISE LEVELS ( AC AIR OUTPUT 40 LBS/MIN )										
DISTANCE (M)--> 4 4 4 4 4 4 4 4 4 4 4										
ANGLE (DEG)--> 260 280 290 300 320 340 0 2 2 2 2										
CONDITION-----> A A A A A A A A A A A										
HAZARD/PROTECTION										
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DB) AT EAR										
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DB) AT EAR										
MAXIMUM PERMISSIBLE TIME (T IN MINUTES) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)										
NO PROTECTION										
OASLC										
OASLA										
T										
MINIMUM QPL EAR MUFFS										
OASLA*										
T										
AMERICAN OPTICAL 1700 EAR MUFFS										
OASLA*										
T										
V-51R EAR PLUGS										
OASLA*										
T										
AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS										
OASLA*										
T										
H-133 GROUND COMMUNICATION UNIT										
OASLA*										
T										
COMMUNICATION										
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)										
PSIL										
ANNOUNCE										
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNOB)										
TONE CORRECTION (C IN DB)										
PNLT										
C										



TABLE: MEASURES OF HUMAN NOISE EXPOSURE														IDENTIFICATIONS	
3														OMEGA 3.2 TEST 75-030-001	
NOISE SOURCE/SUBJECT: ( OPERATION: )														RUN 03	
A/M32A-60A GENERATOR SET ( GEN LOADED 100AMP, 240VAC )														10 OCT 75	
AND A/M32C-10 AIR COND. ( 3PH, BY M24T-8 LOAD BANK, )														PAGE M3	
COMBINED UNIT OPERATION ( 40 PSI AIR TO A/M32C-10, )															
NEAR FIELD NOISE LEVELS ( AC AIR OUTPUT 40 LBS/MIN )															
HAZARD/PROTECTION															
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DB) AT EAR															
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DB) AT EAR															
MAXIMUM PERMISSIBLE TIME (T IN MINUTES) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)															
NO PROTECTION															
OASLC															
T															
MINIMUM OPL EAR MUFFS															
OASLA*															
T															
AMERICAN OPTICAL 1700 EAR MUFFS															
OASLA*															
T															
V-51R EAR PLUGS															
OASLA*															
T															
AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS															
OASLA*															
T															
M-133 GROUND COMMUNICATION UNIT															
OASLA*															
T															
COMMUNICATION															
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)															
PSIL															
ANNOYANCE															
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PHD8)															
TONE CORRECTION (C IN DB)															
PNLT															
C															
* BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE.															





TABLE: MEASURED SOUND PRESSURE LEVEL (DB)																			IDENTIFICATION:			
4 1/3 OCTAVE BAND																						
NOISE SOURCE/SUBJECT: ( OPERATION: )																						
A/M32C-10 AIR CONDITIONER ( AC AIR OUTPUT 40LBS/MIN, )																						
AND A/M32A-60A GEN. SET ( GEN LOADED 100AMP, 240VAC )																						
COMBINED UNIT OPERATION ( 3PH, 8Y M24I-8 LOAD BANK, )																						
NEAR FIELD NOISE LEVELS ( 40 PSI AIR TO A/M32C-10 )																						
FREQ (HZ)	DISTANCE (M)-->	4	280	300	4	320	340	4	2	20	2	40	60	2	80	100	120	140	2			
ANGLE (DEG)-->	CONDITION----	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A			
25	79<			81<		85<	85<	81<	81<	77<		79<	77<		81<		81<		81<			
31.5	76<			77<		80<	80<	79<	79<	78<		79<	77<		81<		83<		81<			
40	78<		76<	77<		77<	77<	80<	81<	80<		80<	81<		81<		84<		82<			
50	83<		80<	80<		78<	78<	81<	81<	80<		85	85		86		86		84			
63	88		86	86		83	83	85	85	85		85	85		86		89		87			
80	92		92	91		90	89	89	89	89		89	89		89		90		90			
100	93		92	93		89	89	90	90	90		89	90		90		92		93			
125	93		90	91		87	88	91	90	90		89	90		91		93		90			
160	93		92	94		93	90	92	92	92		89	93		95		94		92			
200	87		87	87		86	84	87	87	86		86	90		91		91		91			
250	85		82	83		83	81	84	84	83		83	85		86		89		89			
315	88		86	84		87	82	83	83	82		84	86		88		89		92			
400	85		85	84		83	78	81	81	82		81	86		88		89		90			
500	88		87	84		84	78	83	83	80		82	87		90		91		92			
630	89		85	82		83	79	78	78	79		82	86		86		86		86			
800	88		84	83		81	77	80	81	80		80	83		83		81		83			
1000	79		79	79		78	73	82	85	78		75	78		77		78		79			
1250	80		78	79		77	71	78	78	83		75	78		76		78		79			
1600	77		76	75		74	72	75	75	78		75	75		75		77		78			
2000	82		77	76		77	76	83	86	83		83	79		75		78		78			
2500	82		78	75		76	76	83	84	81		81	78		78		80		80			
3150	82		79	74		76	76	84	85	82		82	80		78		81		82			
4000	80		81	76		75	75	82	83	78		80	80		78		81		83			
5000	79		77	77		79	77	84	85	82		82	85		78		79		86			
6300	76		75	73		74	74	84	84	83		78	81		77		78		84			
8000	74		73	70		73	72	80	80	75		75	77		75		75		81			
10000	79		78	73		72	71	78	75	75		75	80		81		80		87			
OVERALL		101	100	100	96	97	99	99	99	98	100	101	101	102	102	102	102	102	102			
< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.																						

TABLE: MEASURED SOUND PRESSURE LEVEL (DB)										IDENTIFICATION:																			
4 1/3 OCTAVE BAND										OMEGA 3.2																			
										TEST 75-038-001																			
NOISE SOURCE/SUBJECT: ( OPERATION: )										RUN 06																			
A/M32C-10 AIR CONDITIONER ( AC AIR OUTPUT 40LBS/MIN, )										10 OCT 75																			
AND A/M32A-60A GEN. SET ( GEN LOADED 100AMP, 240VAC )										PAGE F3																			
COMBINED UNIT OPERATION ( 3PH, BY M24T-8 LOAD BANK, )																													
NEAR FIELD NOISE LEVELS ( 40 PSI AIR TO A/M32C-10 )																													
DISTANCE (M)--> 2 2 2 2 2 2 2 2 2 2																													
ANGLE (DEG)--> 160 160 160 160 160 160 160 160 160 160																													
CONDITION-----> A A A A A A A A A A																													
FREQ (HZ)	25	31.5	40	50	63	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000	OVERALL	
	81<	79<	81<	82<	87	92	92	94	94	80<	77<	77<	76<	81<	84	85	82	82	80	81	83	86	88	95	91	86	91	103	
	80<	80<	84<	83<	88	91	91	94	94	80<	77<	77<	76<	81<	84	85	82	82	80	81	83	86	88	95	91	86	91	102	
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	89	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90
	80<	83<	86	87	92	92	92	95	95	80<	87	88	87	86	91	91	89	89	89	89	89	90	90	90	90	90	90	90	90



[illegible]

MEASURED SOUND PRESSURE LEVEL (DB)										IDENTIFICATION:			
OCTAVE BAND													
4												OMEGA 3.2	
												TEST 75-030-001	
												RUN 05	
												10 OCT 75	
												PAGE J2	
NOISE SOURCE/SUBJECT:													
( OPERATION:													
A/M32C-10 AIR CONDITIONER ( AC AIR OUTPUT 40LBS/MIN,													
AND A/M32A-60A GEN. SET ( GEN LOADED 100AMP, 240VAC													
COMBINED UNIT OPERATION ( 3PH, BY M24T-6 LOAD BANK,													
NEAR FIELD NOISE LEVELS ( 40 PSI AIR TO A/M32C-10 )													
DISTANCE (M)--> 4													
ANGLE (DEG)--> 260													
CONDITION-----> A													
FREQ (HZ)										2	2	2	2
31.5	83	84	86	87	85	81	91	91	91	80	100	120	140
63	94	92	91	91	91	91	91	91	91	A	A	A	A
125	96	97	95	94	96	95	95	95	96	97	98	97	97
250	91	85	90	87	90	89	89	89	92	93	94	94	95
500	92	88	88	83	86	85	86	86	91	93	93	94	94
1000	89	86	83	79	85	88	83	83	85	84	84	85	86
2000	85	82	80	79	86	89	85	85	82	81	83	84	84
4000	85	84	81	82	88	89	86	86	87	83	85	89	91
8000	81	80	77	77	86	85	81	81	84	83	83	90	90
OVERALL	101	100	100	98	99	99	97	97	100	100	101	102	102



TABLE: MEASURED SOUND PRESSURE LEVEL (DB)										IDENTIFICATION:	
OCTAVE BAND											

TABLE: MEASURES OF HUMAN NOISE EXPOSURE														IDENTIFICATION:	
5														OMEGA 3.2	
NOISE SOURCE/SUBJECT: ( OPERATION: )														TEST 75-030-001	
A/M32C-10 AIR CONDITIONER ( AC AIR OUTPUT 40LBS/MIN, )														RUN 04	
AND A/M32A-60A GEN. SET ( GEN LOADED 100AMP, 240VAC )														10 OCT 75	
COMBINED UNIT OPERATION ( 3PH, 8Y M24T-8 LOAD BANK, )															
NEAR FIELD NOISE LEVELS ( 40 PSI AIR TO A/M32C-10 )														PAGE H1	
DISTANCE (M)--> 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4															
ANGLE (DEG)--> 0 20 40 60 80 100 120 140 160 180 200 220 240															
CONDITION-----> A A A A A A A A A A A A A															
HAZARD/PROTECTION															
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DB) AT EAR															
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DB) AT EAR															
MAXIMUM PERMISSIBLE TIME (T IN MINUTES) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)															
NO PROTECTION															
OASLC														101	
OASLA														103	
T														97	
MINIMUM QPL EAR MUFFS														50	
OASLA*														71	
T														80	
AMERICAN OPTICAL 1700 EAR MUFFS														807	
OASLA*														76	
T														960	
V-51R EAR PLUGS														71	
OASLA*														73	
T														960	
AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS														58	
OASLA*														960	
T														960	
H-133 GROUND COMMUNICATION UNIT														70	
OASLA*														71	
T														960	
COMMUNICATION															
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)															
PSIL														89	
ANNOYANCE															
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)															
TONE CORRECTION (C IN DB)															
PNLT														112	
C														110	
1														1	
2														1	
107														113	
107														115	
107														116	
107														115	
107														115	
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107															



TABLE: MEASURES OF HUMAN NOISE EXPOSURE																IDENTIFICATIONS				
5																				
NOISE SOURCE/SUBJECT: ( OPERATION: )																OMEGA 3.2				
A/M32C-10 AIR CONDITIONER ( AC AIR OUTPUT 40LBS/MIN, )																TEST 75-030-001				
AND A/M32A-60A GEN. SET ( GEN LOADED 100AMP, 240VAC )																RUN 05				
COMBINED UNIT OPERATION ( 3PH, 8V M24T-8 LOAD BANK, )																10 OCT 75				
NEAR FIELD NOISE LEVELS ( 40 PSI AIR TO A/M32C-10 )																PAGE H2				
DISTANCE (M)--> 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4																2	2	2	2	2
ANGLE (DEG)--> 260 260 260 260 260 260 260 260 260 260 260 260 260 260 260																80	100	120	140	
CONDITION--> A A A A A A A A A A A A A A A																A	A	A	A	A
HAZARD/PROTECTION																				
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DB) AT EAR																				
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DB) AT EAR																				
MAXIMUM PERMISSIBLE TIME (T IN MINUTES) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)																				
NO PROTECTION																				
OASLC	100	99	99	99	98	96	99	99	97	99	100	101	101	102						
OASLA	95	92	91	91	91	88	94	95	92	94	93	94	96	97						
T	71	120	143	143	143	240	85	71	120	85	101	85	60	50						
MINIMUM QPL EAR MUFFS																				
OASLA*	78	77	77	77	76	74	76	76	75	77	78	79	79	79						
T	960	960	960	960	960	960	960	960	960	960	960	960	960	960						
AMERICAN OPTICAL 1700 EAR MUFFS																				
OASLA*	73	73	73	73	71	70	71	71	70	72	73	74	74	74						
T	960	960	960	960	960	960	960	960	960	960	960	960	960	960						
V-51R EAR PLUGS																				
OASLA*	71	69	68	68	67	64	67	68	66	69	71	71	72	73						
T	960	960	960	960	960	960	960	960	960	960	960	960	960	960						
AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS																				
OASLA*	57	56	55	55	54	52	55	56	53	56	57	57	58	58						
T	960	960	960	960	960	960	960	960	960	960	960	960	960	960						
H-133 GROUND COMMUNICATION UNIT																				
OASLA*	68	67	67	67	65	64	68	69	66	67	67	68	69	69						
T	960	960	960	960	960	960	960	960	960	960	960	960	960	960						
COMMUNICATION																				
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)																				
PSIL	89	86	84	84	84	80	86	87	85	86	86	87	88	88						
ANNNOYANCE																				
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)																				
TONE CORRECTION (C IN DB)																				
PNLT	110	108	107	106	104	110	111	109	110	109	110	112	114							
C	1	1	1	1	1	1	1	2	1	1	1	1	2	1						
* BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE.																				

\* BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE.

TABLE: MEASURES OF HUMAN NOISE EXPOSURE													
5													
IDENTIFICATION:													
OMEGA 3.2													
TEST 75-030-001													
RUN 06													
10 OCT 75													
PAGE M3													
NOISE SOURCE/SUBJECT: ( OPERATIONS: )													
A/M32C-10 AIR CONDITIONER ( AC AIR OUTPUT 40LBS/MIN, )													
AND A/M32A-60A GEN. SET ( GEN LOADED 100AMP, 240VAC )													
COMBINED UNIT OPERATION ( 3PH, BY M24T-8 LOAD BANK, )													
NEAR FIELD NOISE LEVELS ( 40 PSI AIR TO A/M32C-10 )													
HAZARD/PROTECTION													
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DB) AT EAR													
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DB) AT EAR													
MAXIMUM PERMISSIBLE TIME (T IN MINUTES) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)													
NO PROTECTION													
OASLC	103	102	101	101	100	100	100	99	98	98	98	98	98
OASLA	100	96	96	96	94	93	93	92	92	91	91	91	91
T	30	60	60	60	85	101	101	120	120	143	143	143	143
MINIMUM QPL EAR MUFFS													
OASLA*	80	79	79	79	77	77	77	77	76	76	76	76	76
T	960	960	960	960	960	960	960	960	960	960	960	960	960
AMERICAN OPTICAL 1700 EAR MUFFS													
OASLA*	75	75	74	74	73	73	73	72	71	71	71	71	71
T	960	960	960	960	960	960	960	960	960	960	960	960	960
V-51R EAR PLUGS													
OASLA*	73	73	72	72	71	70	70	68	68	67	67	67	67
T	960	960	960	960	960	960	960	960	960	960	960	960	960
AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS													
OASLA*	60	58	58	58	56	56	56	55	54	54	54	54	54
T	960	960	960	960	960	960	960	960	960	960	960	960	960
H-133 GROUND COMMUNICATION UNIT													
OASLA*	71	69	69	69	67	67	67	66	65	66	66	66	66
T	960	960	960	960	960	960	960	960	960	960	960	960	960
COMMUNICATION													
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)													
PSIL	89	88	87	88	87	86	86	85	85	84	84	84	84
ANNOYANCE													
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNOB)													
TONE CORRECTION (C IN DB)													
PNLT	118	113	113	112	110	109	108	108	110	108	108	108	108
C	2	1	2	1	1	1	1	1	2	1	1	1	1
* BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE.													

\* BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE.



TABLE: MEASURED SOUND PRESSURE LEVEL (DB)																	IDENTIFICATION:		
6																	OMEGA 1.4		
1/3 OCTAVE BAND																	TEST 75-030-001		
DISTANCE = 20 METERS																	RUN 01		
NOISE SOURCE/SUBJECT:																	15 OCT 75		
A/M32A-60A GENERATOR SET ( GEN LOADED 100AMP, 240VAC )																	PAGE 2		
AND A/M32C-10 AIR COND. ( 3PH, BY M24T-8 LOAD BANK, )																			
COMBINED UNIT OPERATION ( 40 PSI AIR TO A/M32C-10, )																			
FAR FIELD NOISE LEVELS ( AC AIR OUTPUT 40 LBS/MIN )																			
METEOROLOGY: TEMP = 29 C																			
BAR PRESS = .693 M HG																			
REL HUMID = 24 %																			
FREQ (HZ)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	82<	80<	79<	81<	81<	80<	79<	78<	77<	75<	76<	79<	79<	74<	75<	76<	76<	75<	
31.5	80<	80<	80<	79<	79<	78<	77<	76<	75<	80<	81<	79<	79<	80<	78<	83<	83<	84<	83<
40	80<	78<	80<	80<	80<	79<	78<	77<	75<	75<	76<	77<	77<	77<	77<	82<	83<	82<	82<
50	75<	77<	77<	77<	77<	76<	75<	74<	73<	79<	81<	80<	79<	79<	79<	79<	81<	80<	82<
63	79<	77<	78<	78<	79<	79<	78<	77<	75<	79<	79<	79<	79<	80<	82<	83<	84<	83<	85<
80	82	82	79<	83	83	82	82	81	81	81	81	81	82	80	81	83	85	85	86<
100	85	85	81	84	87	84	83	80	79	81	80	77	77	76	77	79	82	81	84<
125	84	82	80	84	84	83	81	80	80	79	81	80	79	79	79	79	81	80	82<
160	86	84	82	88	85	84	83	83	82	86	85	82	81	81	81	84	86	87	87<
200	78	76	79	81	78	78	79	79	79	79	79	79	79	80	82	83	84	83	85<
250	80	78	81	83	81	80	80	80	81	81	81	81	82	80	81	83	85	85	86<
315	83	82	86	87	85	83	82	81	81	81	80	77	77	76	77	79	82	81	84<
400	77	75	82	81	80	79	78	77	75	74	72	71	71	72	70	71	74	76	77<
500	78	77	83	81	81	80	77	76	76	77	75	72	71	68	69	76	81	82	82<
630	71	72	79	77	76	74	73	71	70	70	70	72	68	74	76	74	77	82	83<
800	68	67	74	70	72	71	71	71	71	69	69	73	71	76	78	74	76	79	84<
1000	65	64	68	68	69	68	67	66	64	68	66	69	68	71	71	73	73	72	78<
1250	61	62	68	67	70	68	66	64	63	65	66	67	65	66	65	67	68	68	71<
1600	58	65	66	66	68	67	64	63	64	63	64	62	63	63	65	65	68	71	71<
2000	62	67	69	69	68	68	68	69	76	69	69	69	65	65	68	68	69	68	70<
2500	65	68	72	72	72	71	71	71	70	69	67	68	67	66	68	69	70	72	73<
3150	67	65	72	71	72	74	75	78	71	71	71	70	71	71	71	70	72	75	76<
4000	66	69	71	71	73	74	75	77	74	72	72	73	72	72	73	74	74	74	79<
5000	65	69	69	68	67	67	67	67	66	66	68	67	69	69	72	71	73	75	77<
6300	63	66	67	68	67	66	65	64	63	64	65	66	67	67	69	69	71	73	74<
8000	58	64	66	67	68	66	64	63	64	64	65	65	65	65	65	67	68	70	72<
10000	60	65	67	72	70	69	67	66	65	66	66	67	68	68	68	68	70	72	71<
OVERALL	93	92	93	95	94	93	92	91	90	91	91	89	89	89	90	92	93	94	95<

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: MEASURED SOUND PRESSURE LEVEL (DB)																	IDENTIFICATION:	
1/3 OCTAVE BAND																	OMEGA 1-4	
DISTANCE = 20 METERS																	TEST 75-030-001	
NOISE SOURCE/SUBJECT:																	RUN 02	
( OPERATION:																	15 OCT 75	
( GEN LOADED 100AMP, 240VAC																	PAGE 2	
( 3PH, BY M24T-8 LOAD BANK,																		
( 40 PSI AIR TO A/M32C-10,																		
( AC AIR OUTPUT 40 LBS/MIN																		
TEMP = 29 C																		
BAR PRESS = .693 M HG																		
REL HUMID = 24 %																		
METEOROLOGY:																		
ANGLE (DEGREES)																		
FREQ	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	
( HZ)																		
25												78<		80<	78<	83<	82<	
31.5																79<	80<	
40																80<	80<	
50																82<	81<	
63	79<	78<	77<	77<	77<	77<	77<	77<	77<	79<	79<	79<	79<	81<	79<	81<	81<	
80	83	82	80<	80<	82	80<	80<	82	82	82	84	82	85	84	84	84	83	
100	83	82	80	81	79	78	78	80	82	84	84	86	87	85	84	84	84	
125	80	81	81	81	83	83	82	82	79	80	79	81	81	83	84	82	82	
160	87	86	83	83	82	83	85	85	85	83	84	84	83	84	87	85	84	
200	85	83	83	83	82	81	80	81	82	84	83	82	79	81	81	80	78	
250	87	84	84	82	82	82	82	82	82	83	85	84	84	83	83	84	80	
315	84	80	80	80	79	79	79	79	79	82	83	84	84	85	85	87	81	
400	77	71	71	71	73	72	72	73	73	74	76	77	77	78	80	82	78	
500	82	79	73	72	75	71	72	72	73	76	78	76	78	79	81	83	81	
630	81	78	75	75	78	76	67	71	71	74	76	75	75	72	73	78	77	
800	82	83	84	81	81	78	73	73	71	73	75	76	77	74	75	76	73	
1000	76	78	78	75	74	71	70	68	66	66	66	69	69	67	69	70	68	
1250	70	69	69	68	69	69	69	69	65	67	64	67	66	64	67	68	65	
1600	70	70	68	65	64	64	64	65	66	65	65	64	65	64	65	67	63	
2000	70	71	73	69	70	67	67	67	66	67	67	72	72	71	70	70	67	
2500	72	71	70	67	68	67	66	67	65	67	68	71	73	70	71	71	69	
3150	75	74	71	70	70	70	68	67	69	73	72	70	73	70	70	74	69	
4000	76	76	73	72	72	72	72	71	70	73	73	70	72	70	71	73	68	
5000	77	76	73	72	70	68	69	68	67	66	66	67	68	71	68	67	67	
6300	74	75	72	70	69	67	68	67	66	65	64	65	66	65	67	68	64	
8000	71	72	69	67	65	65	65	64	63	62	64	64	64	64	66	66	62	
10000	72	70	70	68	67	67	67	65	65	65	66	67	67	66	69	68	60	
OVERALL	94	93	92	91	91	91	90	91	91	92	93	92	93	94	94	95	93	
< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE																		

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.



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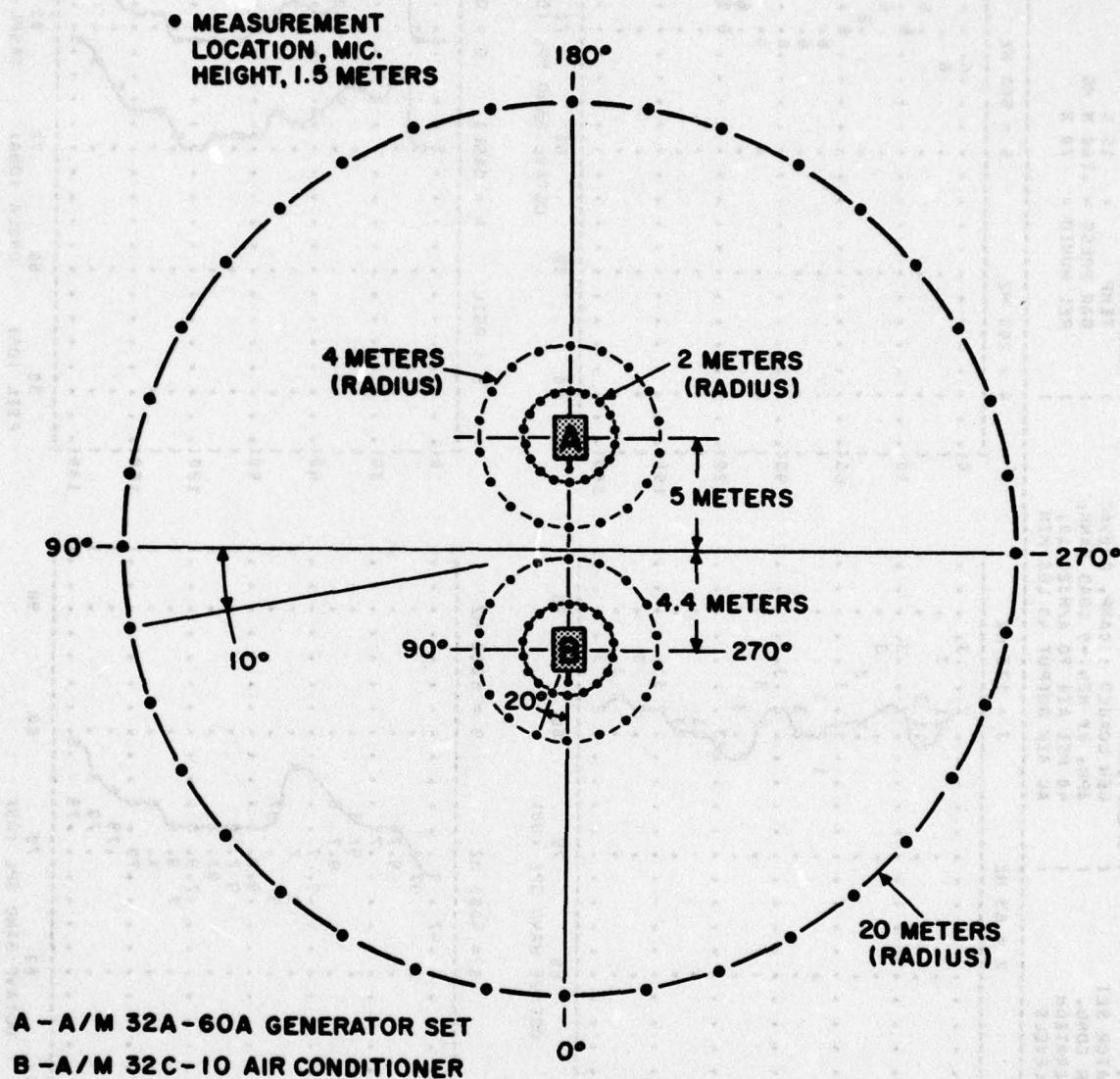


Figure 1. Measurement Locations

FIGURE 1 NORMALIZED FARFIELD NOISE LEVELS

2 DISTANCE = 30 METERS

IDENTIFICATION:  
 OMEGA 1.4  
 TEST 75-030-001  
 RUN 01  
 15 OCT 75  
 PAGE 4

NOISE SOURCE/SUBJECT:  
 A/M32A-60A GENERATOR SET  
 AND A/M32C-10 AIR COND.  
 COMBINED UNIT OPERATION  
 FAR FIELD NOISE LEVELS

OPERATIONS:  
 GEN LOADED 100AMP, 240VAC  
 3PH, BY M24T-8 LOAD BANK,  
 40 PSI AIR TO A/M32C-10,  
 AC AIR OUTPUT 40 LBS/MIN

METEOROLOGY:  
 TEMP = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %

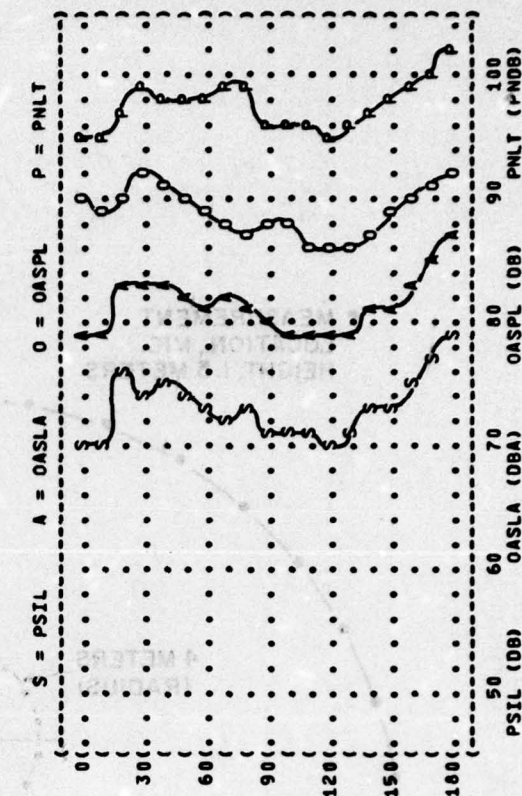
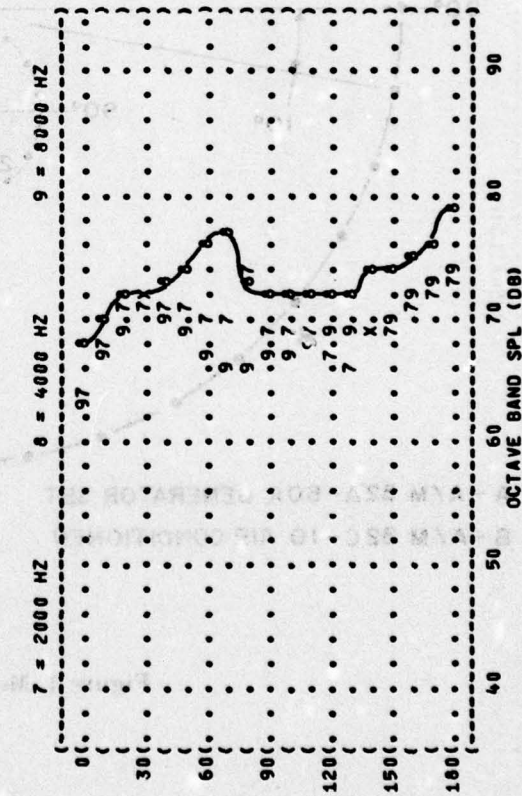
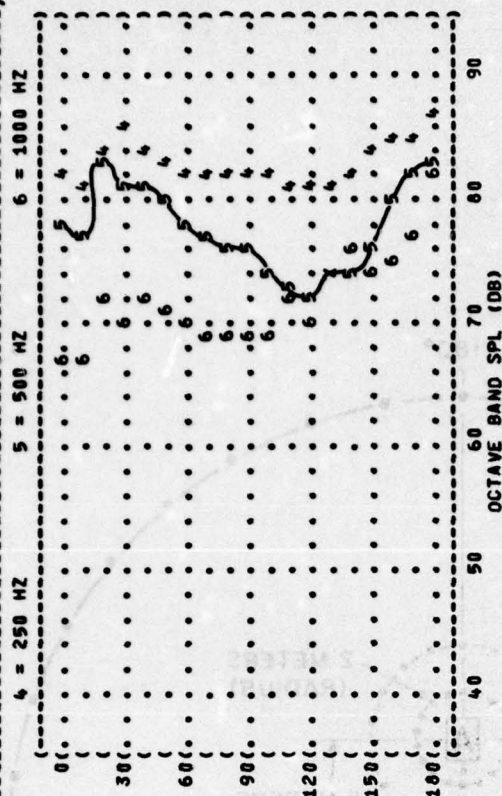
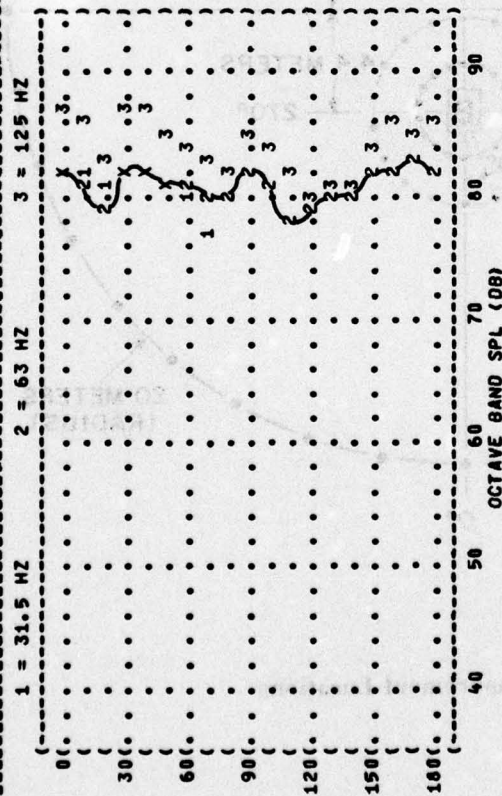




FIGURE 1 NORMALIZED FARFIELD NOISE LEVELS

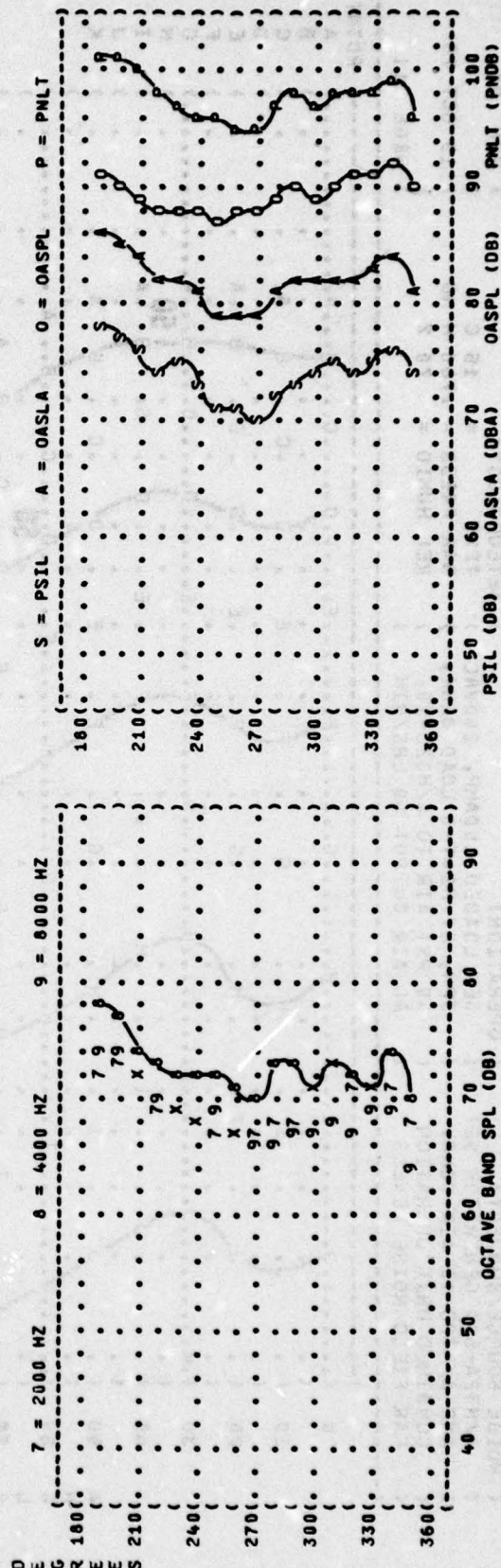
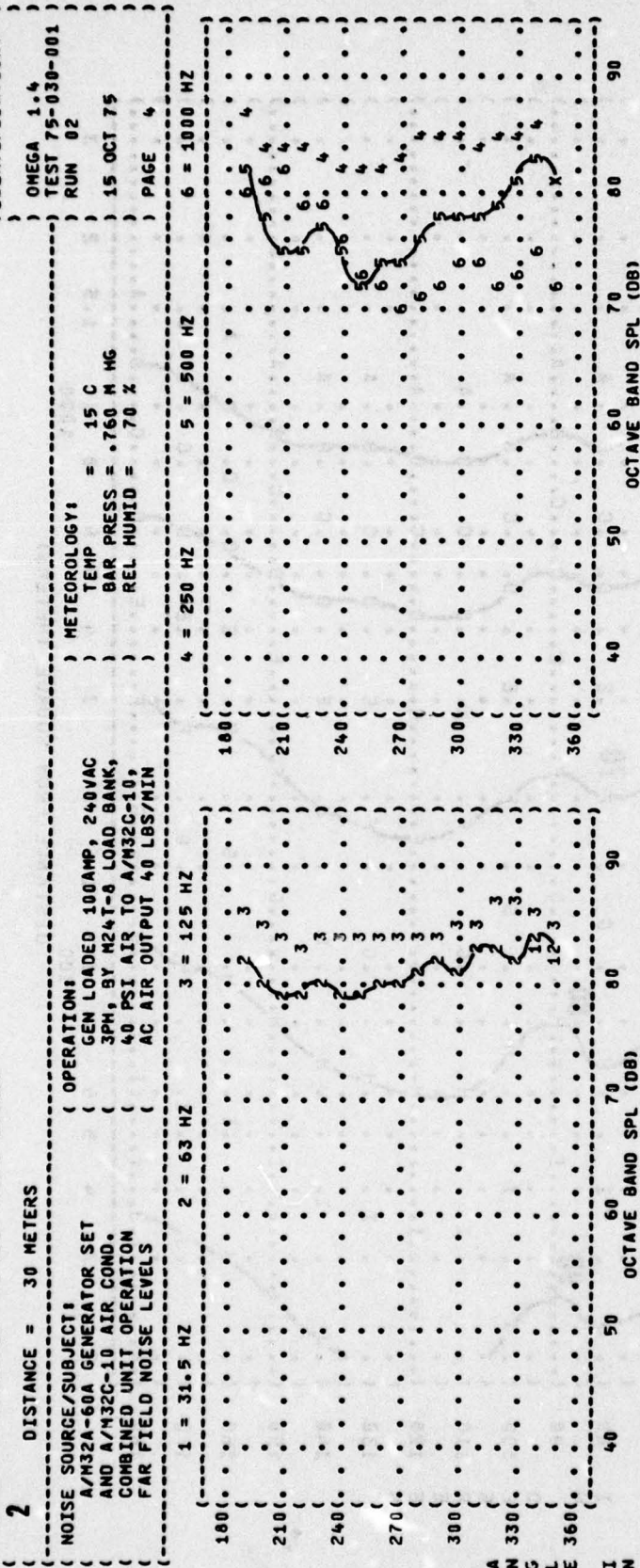


FIGURE: OVERALL SOUND PRESSURE LEVEL (OASPL)  
 3 EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY: 15 C  
 A/M32A-60A GENERATOR SET ( GEN LOADED 100AMP, 240VAC )  
 AND A/M32C-10 AIR COND. ( 3PH, 8Y M24T-8 LOAD BANK, ) BAR PRESS = .760 M HG  
 COMBINED UNIT OPERATION ( 40 PSI AIR TO A/M32C-10, ) REL HUMID = 70 %  
 FAR FIELD NOISE LEVELS ( AC AIR OUTPUT 40 LBS/MIN )

IDENTIFICATION: )  
 )  
 ) OMEGA 1.4  
 ) TEST 75-030-001  
 ) RUN 01  
 ) 15 OCT 75  
 ) PAGE 11

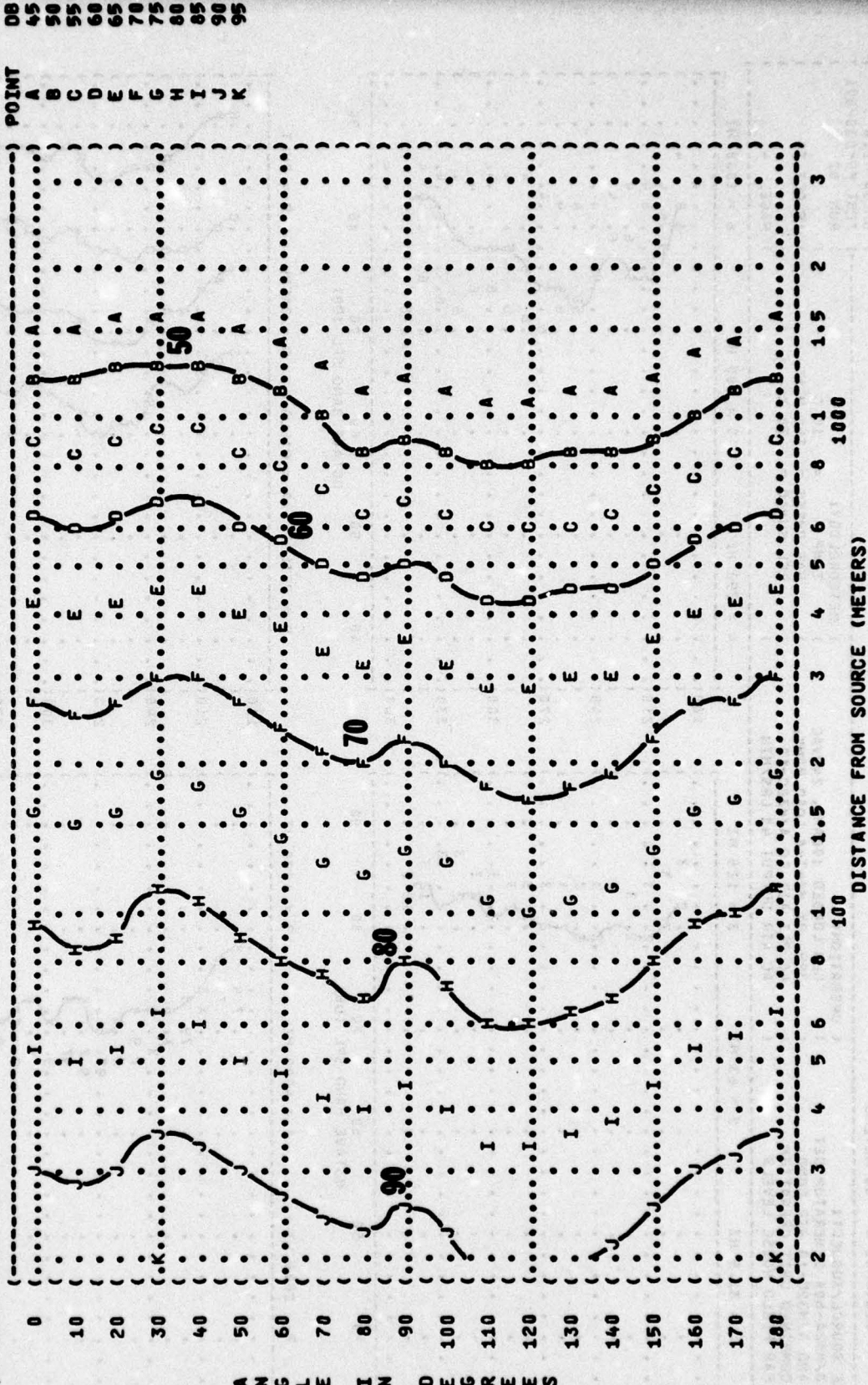


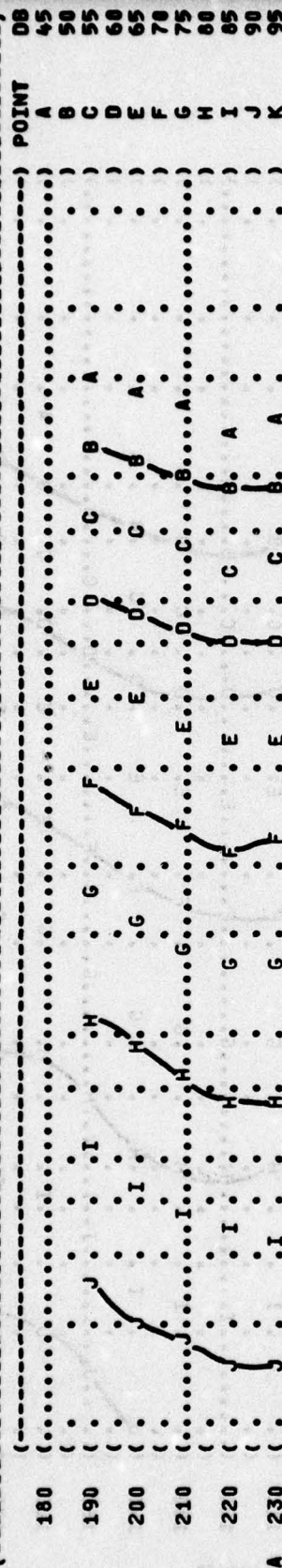


FIGURE: OVERALL SOUND PRESSURE LEVEL (OASPL)  
EQUAL LEVEL CONTOURS (DB)

3

NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY: )  
 A/M32A-60A GENERATOR SET ( GEN LOADED 100AMP, 240VAC ) TEMP = 15 C  
 AND A/M32C-10 AIR COND. ( 3PH, 8Y M24T-6 LOAD BANK, ) BAR PRESS = .760 M HG  
 COMBINED UNIT OPERATION ( 40 PSI AIR TO A/M32C-10, ) REL HUMID = 70 %  
 FAR FIELD NOISE LEVELS ( AC AIR OUTPUT 40 LBS/MIN )

IDENTIFICATION: )  
 ) OMEGA 1.4  
 ) TEST 75-030-001  
 ) RUN 02  
 ) 15 OCT 75  
 ) PAGE 11



A N G L E I N O E G R E E S

DISTANCE FROM SOURCE (METERS)

IDENTIFICATION: )

4

NOISE SOURCE/SUBJECT:

**A/M32A-60A GENERATOR SET**

**AND A/M32C-10 AIR COND.**

**COMBINED UNIT OPERATION**

## FAR FIELD NOISE LEVELS

## OPERATION:

**GEN LOAD=0 100AMP, 240VAC**

3PH, BY M24T-8 LOAD BANK,

40 PSI AIR TO A/M32C-10,

**AC AIR OUTPUT 40 LBS/MIN**

## METEOROLOGY:

TEMP = 15 C

BAR PRESS = .760 M HG

REL HUMID = 70 %

DBC	POINT
45	A
50	B
55	C
60	D
65	E
70	F
75	G
80	H
85	I
90	J
95	K

0 10 20 30 40 50 60 70 80 90

A B C D E F G H I J K

«ZUJW HZ OEUZUWWS»

32

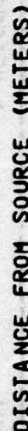


**OMEGA 1.4**

### FAR FIELD NOISE LEVELS

AC AIR OUTPUT 40 LBS/MIN

REL HUMID = 70 %



ANGLE IN DEGREES

IDENTIFICATION:

.....

## OPERATIONS

GEN LOADED 100AMP, 240VAC  
3PH, BY M24T-6 LOAD BANK,

40 PSI AIR TO A/M32C-10,

AC AIR OUTPUT 40 LBS/MIN

## METEOROLOGY:

TEMP = 15 C

15 OCT 75

—

) PAGE 13

[illegible]

ANGLE IN DEGREES

000Y



FIGURE: A-WEIGHTED OVERALL SOUND LEVEL (OASLA)  
 5 EQUAL LEVEL CONTOURS (DBA)

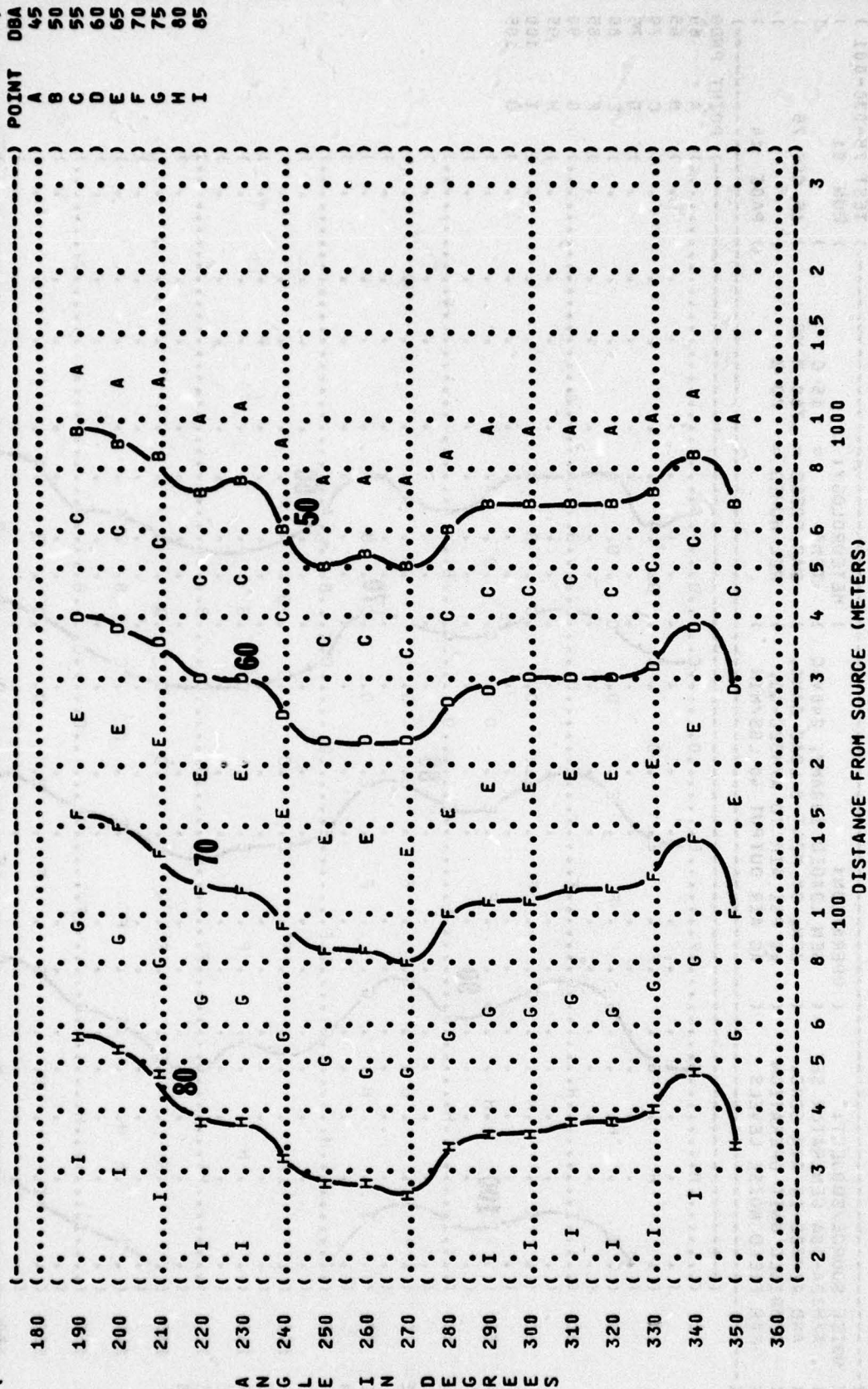
NOISE SOURCE/SUBJECT: ( OPERATION: )

A/M32A-60A GENERATOR SET ( GEN LOADED 100AMP, 240VAC )  
 AND A/M32C-10 AIR COND. ( 3PH, BY M24T-8 LOAD BANK, )  
 COMBINED UNIT OPERATION ( 40 PSI AIR TO A/M32C-10, )  
 FAR FIELD NOISE LEVELS ( AC AIR OUTPUT 40 LBS/MIN )

METEOROLOGY: ( )

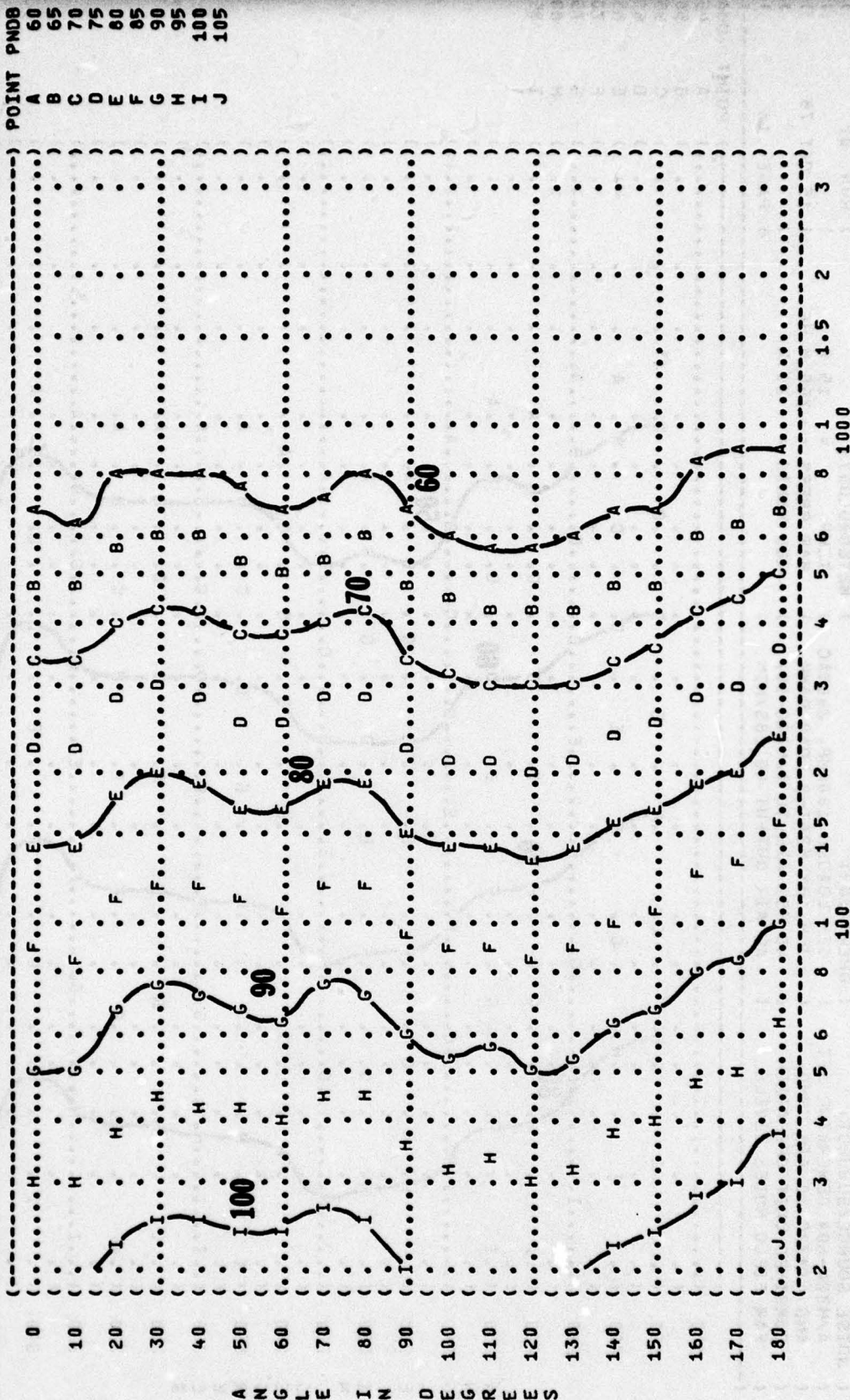
TEMP = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %

IDENTIFICATION: ( )  
 OMEGA 1.4  
 TEST 75-030-001  
 RUN 02  
 15 OCT 75  
 PAGE 13



A N G L E I N D E G R E E S

( FIGURE: PERCEIVED NOISE LEVEL, TONE CORRECTED {PNLT}  
 ( 6  
 ( EQUAL LEVEL CONTOURS (PNDB)  
 ( ) IDENTIFICATION:  
 ( ) OMEGA 1.4  
 ( ) TEST 75-030-001  
 ( ) RUN 01  
 ( ) METEOROLOGY:  
 ( ) TEMP = 15 C  
 ( ) BAR PRESS = .760 M HG  
 ( ) REL HUMID = 70 %  
 ( ) PAGE 14  
 ( ) NOISE SOURCE/SUBJECT:  
 ( ) OPERATION:  
 ( ) GEN LOADED 100AMP, 240VAC  
 ( ) 3PH, BY M24T-8 LOAD BANK,  
 ( ) AND A/M32C-10 AIR COND.  
 ( ) CGMBINED UNIT OPERATION  
 ( ) 40 PSI AIR TO A/M32C-10,  
 ( ) FAR FIELD NOISE LEVELS  
 ( ) AC AIR OUTPUT 40 LBS/MIN



DISTANCE FROM SOURCE (METERS)



```

(-----)
( FIGURE: PERCEIVED NOISE LEVEL, TONE CORRECTED {PNLT} )
( 6 )
( EQUAL LEVEL CONTOURS (PMD9) )
(-----)
( NOISE SOURCE/SUBJECT: )
( A/M32A-60A GENERATOR SET )
( AND A/M32C-10 AIR COND. )
( COMBINED UNIT OPERATION )
( FAR FIELD NOISE LEVELS )
( OPERATION: )
( GEN LOADED 100AMP, 240VAC )
( 3PH, 3Y M24T-8 LOAD BANK, )
( 40 PSI AIR TO A/M32C-10, )
( AC AIR OUTPUT 40 LBS/MIN )
( METEOROLOGY: )
( TEMP = 15 C )
( BAR PRESS = .760 M HG )
( REL HUMID = 70 % )
(-----)
( IDENTIFICATION: )
( )
( )
( OMEGA 1.4 )
( TEST 75-030-001 )
( RUN 02 )
( )
( )
( 15 OCT 75 )
( )
( )
( PAGE 14 )
(-----)

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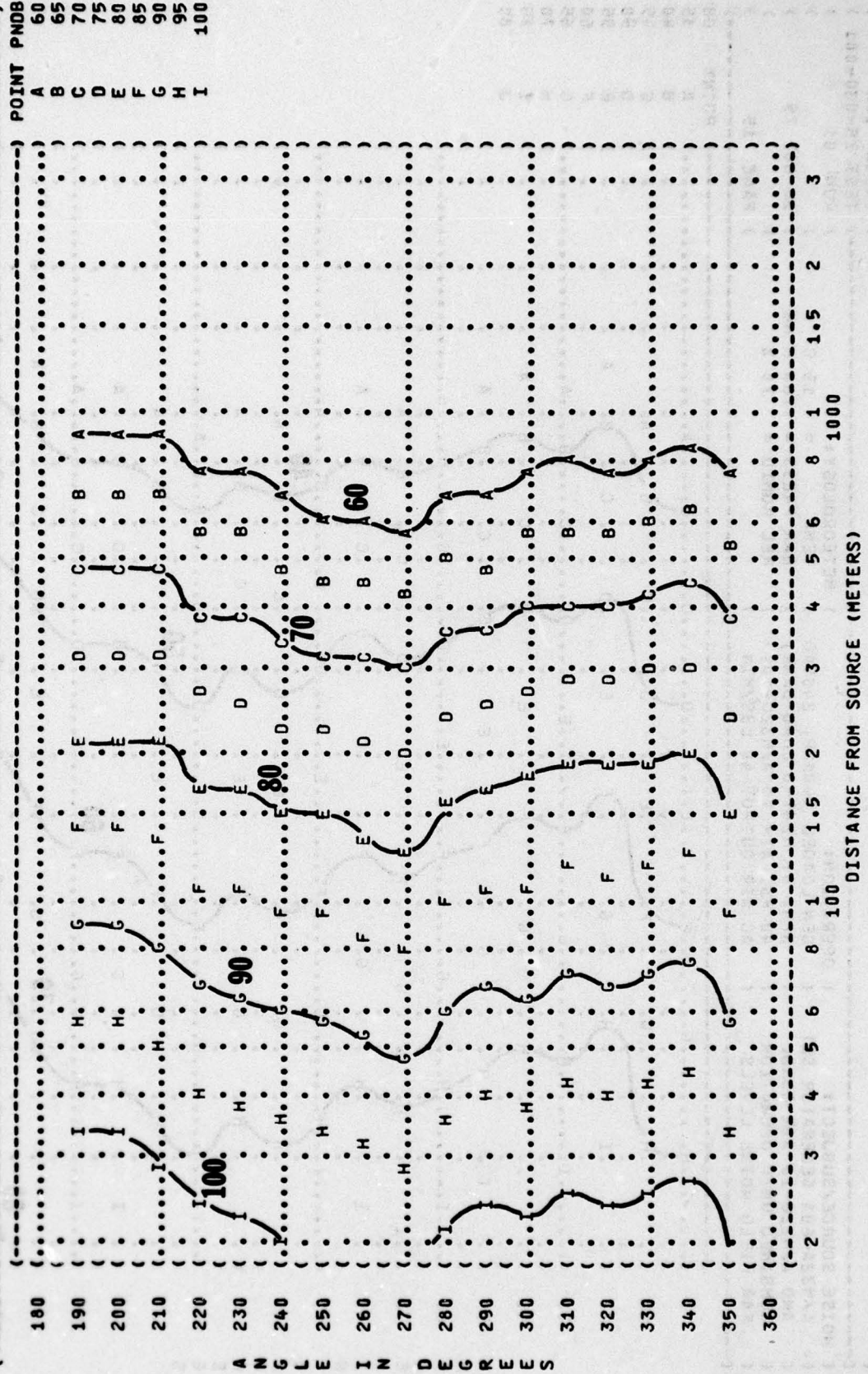
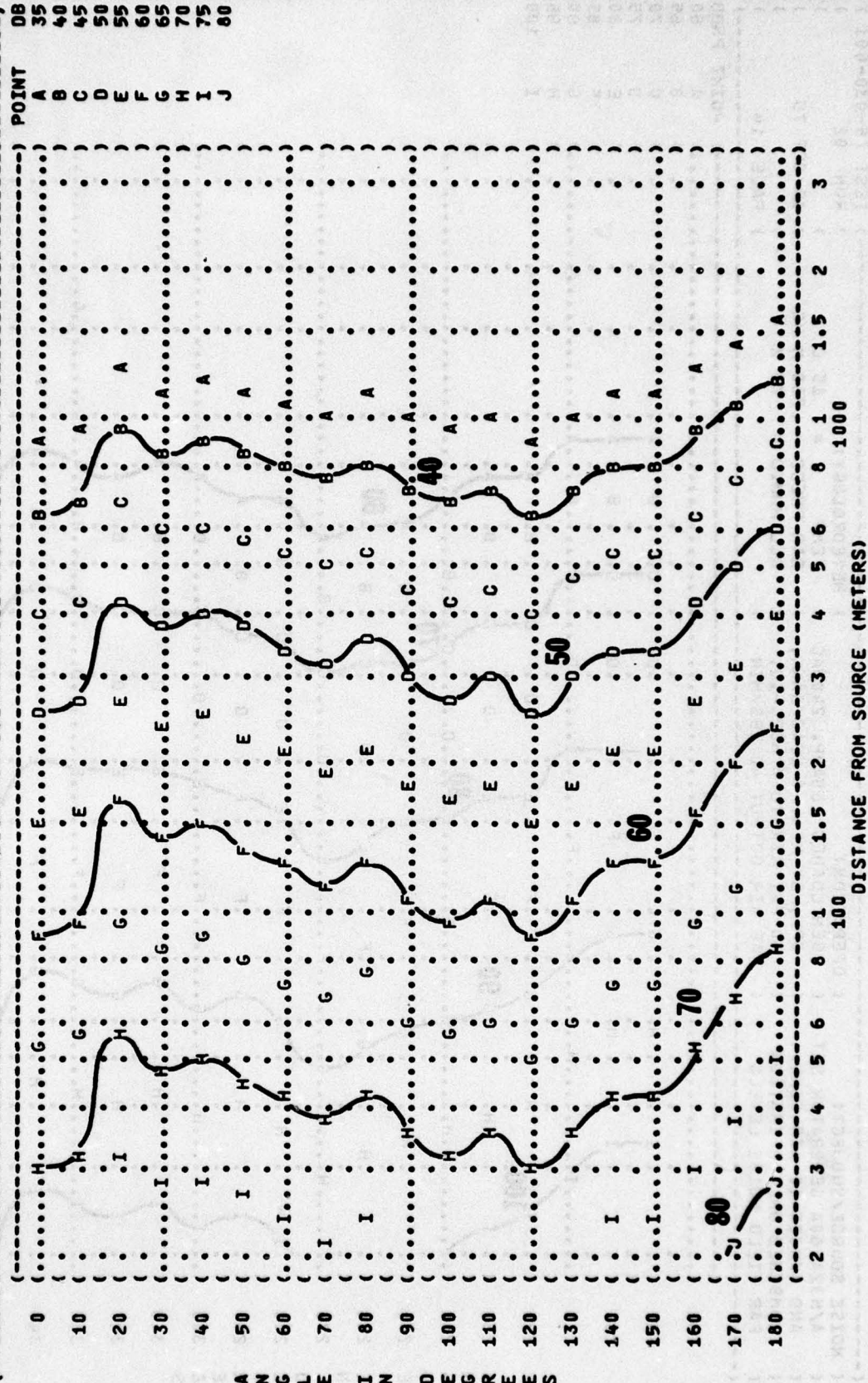


FIGURE: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL)  
 7  
 EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY: )  
 A/M32A-60A GENERATOR SET ( GEN LOADED 100AMP, 240VAC ) TEMP = 15 C )  
 AND A/M32C-10 AIR COND. ( 3PH, BY M24T-8 LOAD BANK, ) BAR PRESS = .760 M HG )  
 COMBINED UNIT OPERATION ( 40 PSI AIR TO A/M32C-10, ) REL HUMID = 70 % )  
 FAR FIELD NOISE LEVELS ( AC AIR OUTPUT 40 LBS/MIN ) )

IDENTIFICATION: )  
 ) OMEGA 1.4 )  
 ) TEST 75-030-001 )  
 ) RUN 01 )  
 ) 15 OCT 75 )  
 ) PAGE 15 )

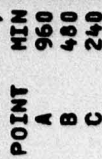






IDENTIFICATION:  
OMEGA 1.4

RUN 01  
15 OCT 75  
PAGE 5



ANGLE IN DEGREES



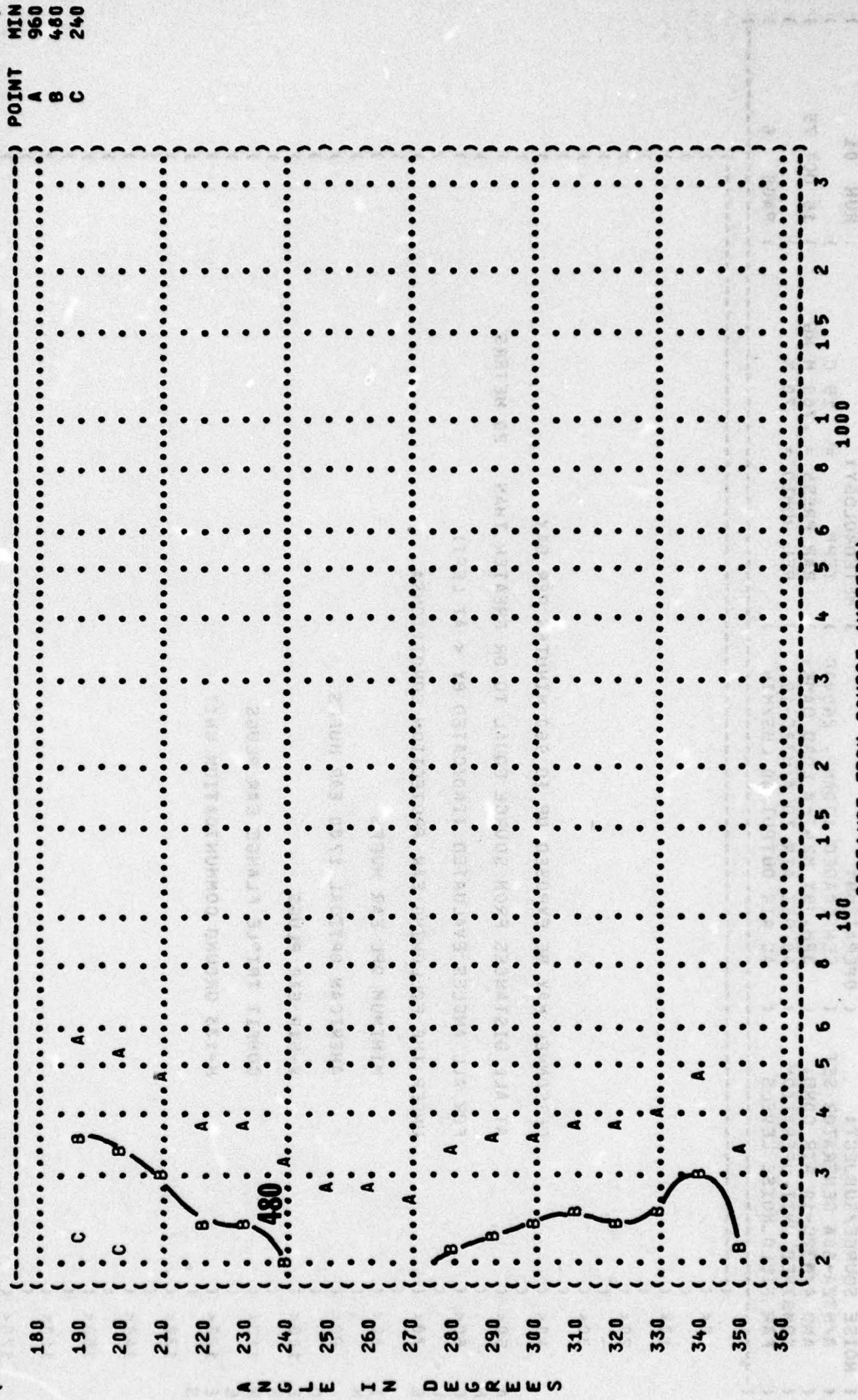
FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)

8  
EQUAL TIME CONTOURS (MINUTES)

NO PROTECTION

NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY: ( )  
 A/M32A-60A GENERATOR SET ( GEN LOADED 100AMP, 240VAC ) TEMP = 15 C  
 AND A/M32C-10 AIR COND. ( 3PH, BY M24T-8 LOAD BANK, ) BAR PRESS = .760 M HG  
 COMBINED UNIT OPERATION ( 40 PSI AIR TO A/M32C-10, ) REL HUMID = 70 %  
 FAR FIELD NOISE LEVELS ( AC AIR OUTPUT 40 LBS/MIN )

OMEGA 1.4  
 TEST 75-030-001  
 RUN 02  
 15 OCT 75  
 PAGE 5



A N G L E I N D E G R E E S

FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)

8

IDENTIFICATION:

OMEGA 1.4

TEST 75-030-001

RUN 01

15 OCT 75

PAGE 6

NOISE SOURCE/SUBJECT:

OPERATION:

METEOROLOGY:

A/M32A-60A GENERATOR SET

GEN LOADED 100AMP, 240VAC

TEMP = 15 C

AND A/M32C-10 AIR COND.

3PH, BY M24T-8 LOAD BANK,

BAR PRESS = .760 M HG

COMBINED UNIT OPERATION

40 PSI AIR TO A/M32C-10,

REL HUMID = 70 %

FAR FIELD NOISE LEVELS

AC AIR OUTPUT 40 LBS/MIN

0<

10<

20<

30<

40<

50<

60<

70<

80<

90<

100<

110<

120<

130<

140<

150<

160<

170<

180<

PERSONNEL MAY BE EXPOSED UP TO 960 MINUTES PER DAY

AT ALL DISTANCES FROM SOURCE EQUAL TO OR GREATER THAN 20 METERS

FOR ALL ANGLES EVALUATED (INDICATED BY < AT LEFT)

UNDER THE FOLLOWING EAR PROTECTION CONDITIONS:

- MINIMUM QPL EAR MUFFS
- AMERICAN OPTICAL 1700 EAR MUFFS
- V-51R EAR PLUGS
- COMFIT TRIPLE FLANGE EAR PLUGS
- H-133 GROUND COMMUNICATION UNIT

2 3 4 5 6 8 1 1.5 2 3 4 5 6 8 1 1.5 2 3

100 1000

DISTANCE FROM SOURCE (METERS)





.....





( FIGURE: SOUND PRESSURE LEVEL (SPL) )  
 ( 9 EQUAL LEVEL CONTOURS (DB) )  
 ( 31.5 HZ OCTAVE BAND )  
 ( NOISE SOURCE/SUBJECT: )  
 ( A/M32A-60A GENERATOR SET )  
 ( AND A/M32C-10 AIR COND. )  
 ( COMBINED UNIT OPERATION )  
 ( FAR FIELD NOISE LEVELS )  
 ( OPERATION: )  
 ( GEN LOADED 100AMP, 240VAC )  
 ( 3PH, BY M24T-8 LOAD BANK, )  
 ( 40 PSI AIR TO A/M32C-10, )  
 ( AC AIR OUTPUT 40 LBS/MIN )  
 ( METEOROLOGY: )  
 ( TEMP = 15 C )  
 ( BAR PRESS = .760 M HG )  
 ( REL HUMID = 70 % )  
 ( IDENTIFICATION: )  
 ( OMEGA 1.4 )  
 ( TEST 75-030-001 )  
 ( RUN 02 )  
 ( 15 OCT 75 )  
 ( PAGE 16 )

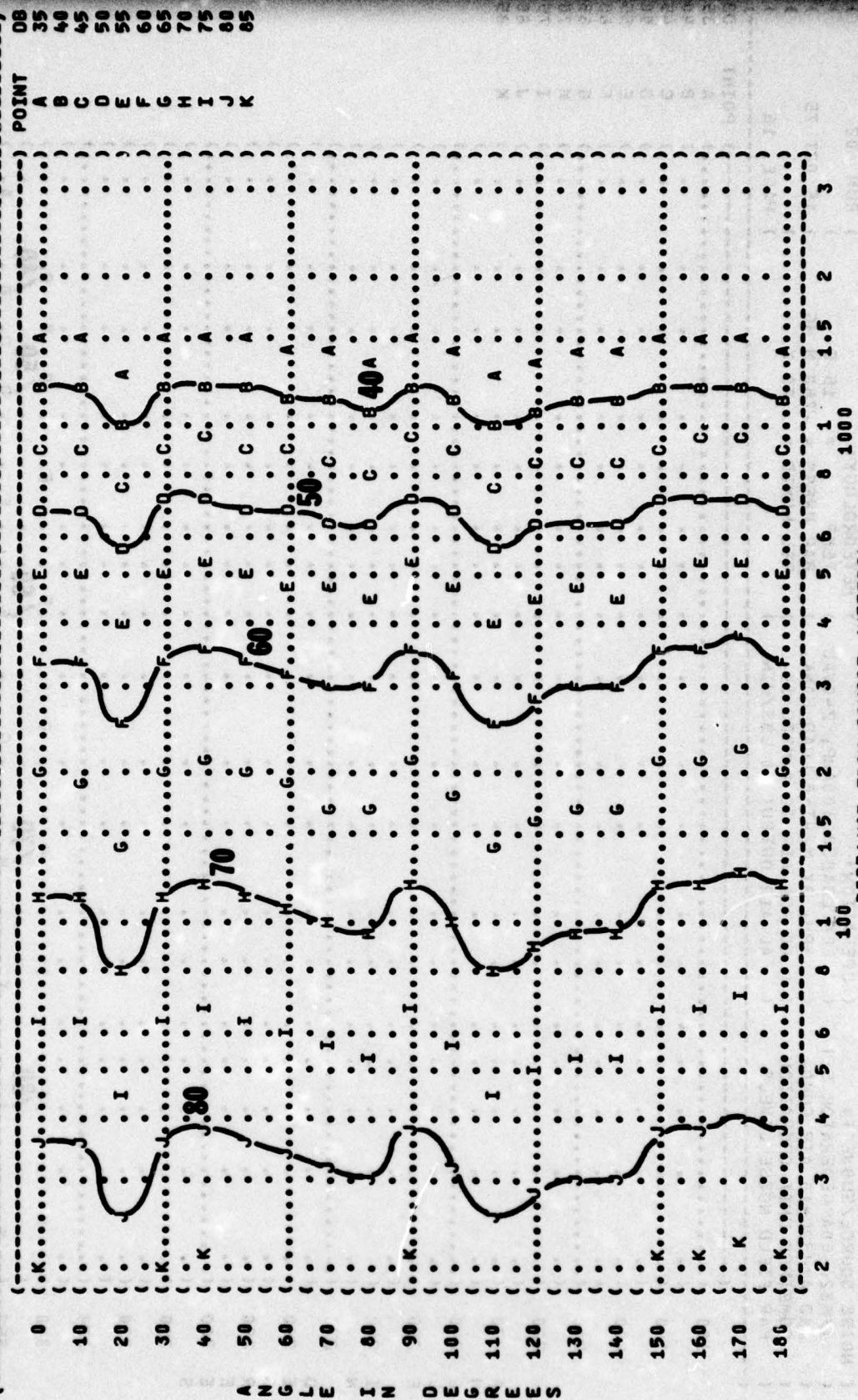
DB	POINT	A	B	C	D	E	F	G	H	I	J	K
180												
190												
200												
210												
220												
230												
240												
250												
260												
270												
280												
290												
300												
310												
320												
330												
340												
350												
360												

A  
N  
G  
L  
E  
I  
N  
D  
E  
G  
R  
E  
E  
S

/80  
/70  
/60  
/50  
/40

DISTANCE FROM SOURCE (METERS)  
 100 1.5 2 3 4 5 6 8 1000

( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 9 EQUAL LEVEL CONTOURS (DB)  
 ( 63 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT:  
 ( A/M32A-60A GENERATOR SET ( OPERATION:  
 ( AND A/M32C-10 AIR COND. ( GEN LOADED 100AMP, 240VAC  
 ( COMBINED UNIT OPERATION ( 3PH, BY M24T-8 LOAD BANK, )  
 ( FAR FIELD NOISE LEVELS ( 40 PSI AIR TO A/M32C-10, )  
 ( AC AIR OUTPUT 40 LBS/MIN )  
 ( ) METEOROLOGY:  
 ( ) TEMP = 15 C  
 ( ) BAR PRESS = .760 M HG  
 ( ) REL HUMID = 70 %  
 ( ) PAGE 17  
 ( ) IDENTIFICATION:  
 ( ) OMEGA 1.4  
 ( ) TEST 75-030-001  
 ( ) RUN 01



DISTANCE FROM SOURCE (METERS)

A N G L E I N D E G R E E S



FIGURE: SOUND PRESSURE LEVEL (SPL)  
EQUAL LEVEL CONTOURS (DB)  
63 HZ OCTAVE BAND

IDENTIFICATION:  
OMEGA 1.4  
TEST 75-030-001  
RUN 02

METEOROLOGY:

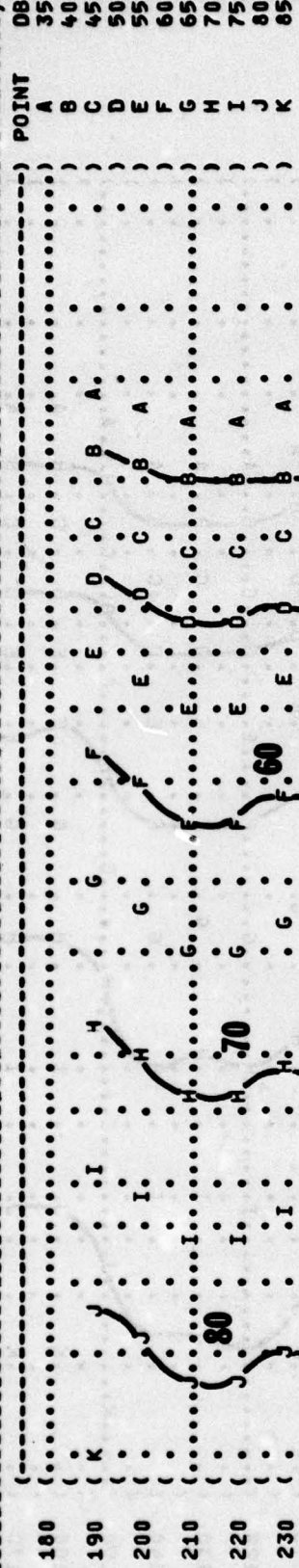
TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %

OPERATION:

GEN LOADED 100AMP, 240VAC  
3PH, BY M24T-8 LOAD BANK,  
40 PSI AIR TO A/M32C-10,  
AC AIR OUTPUT 40 LBS/MIN

NOISE SOURCE/SUBJECT:

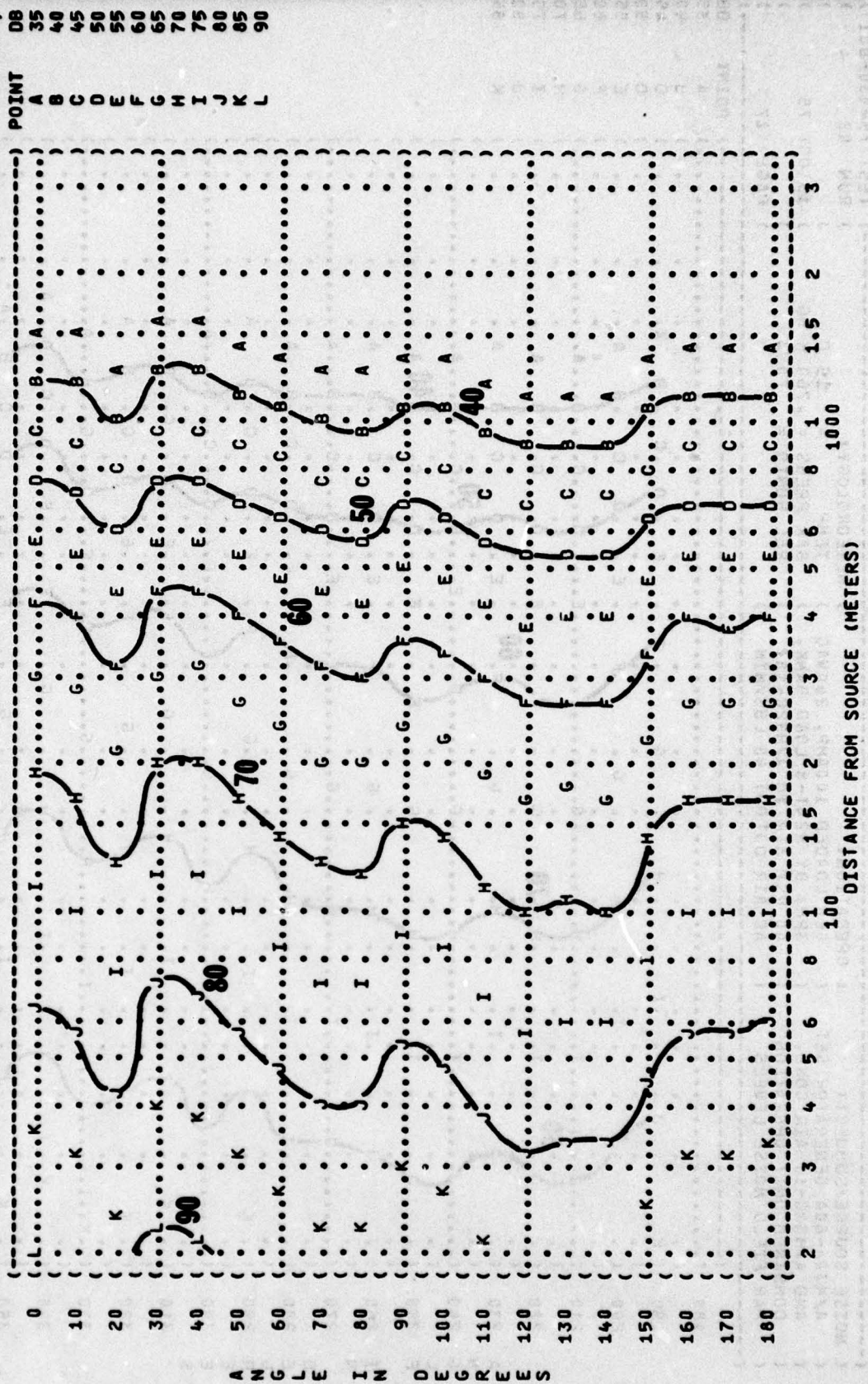
A/M32A-60A GENERATOR SET  
AND A/M32C-10 AIR COND.  
COMBINED UNIT OPERATION  
FAR FIELD NOISE LEVELS



A N G L E I N D E G R E E S

DISTANCE FROM SOURCE (METERS)

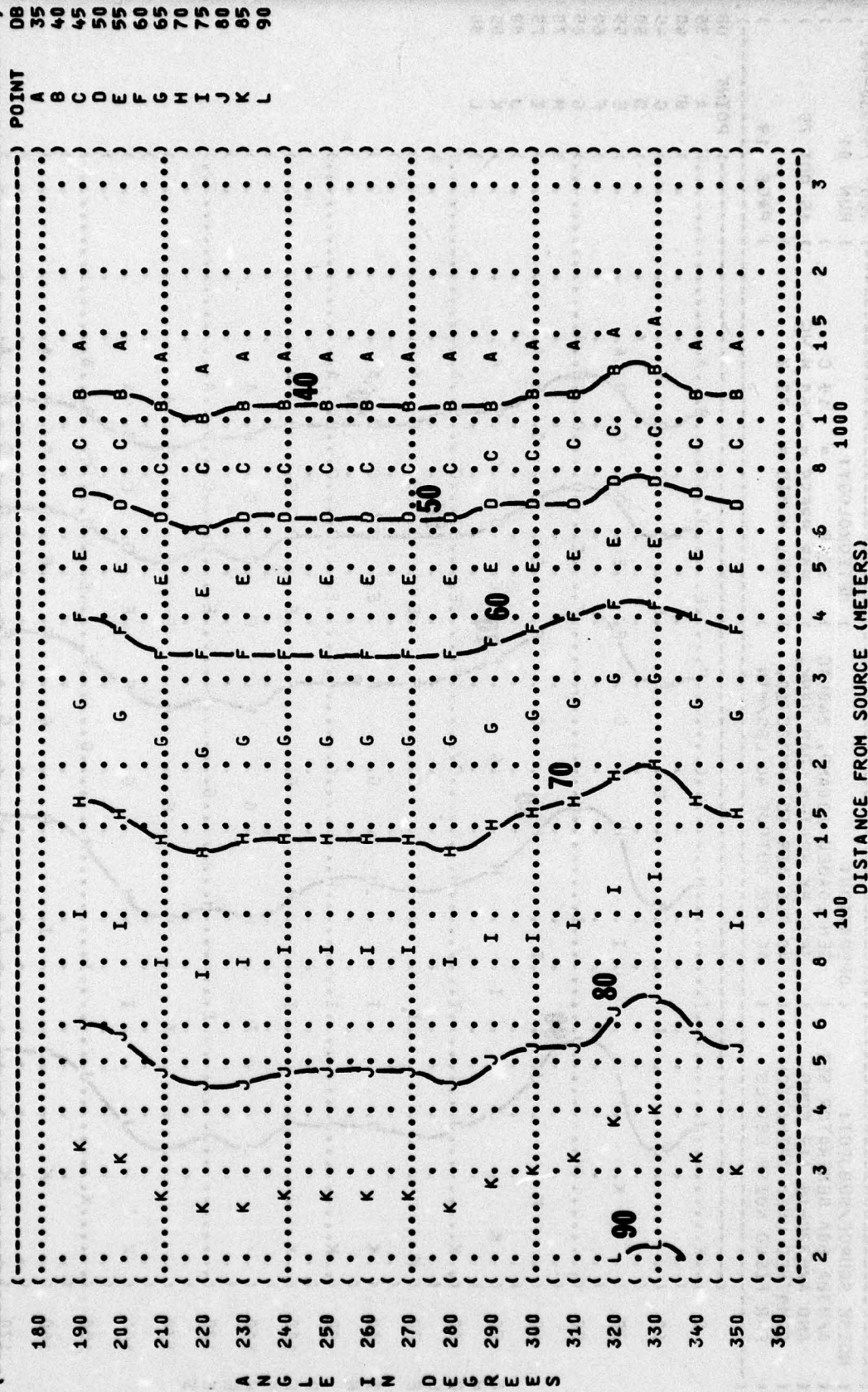
( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 9 EQUAL LEVEL CONTOURS (DB)  
 ( 125 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION:  
 ( A/M32A-60A GENERATOR SET ( GEN LOADED 100AMP, 240VAC  
 ( AND A/M32C-10 AIR COND. ( 3PH, BY M24T-8 LOAD BANK, ) TEMP = 15 C  
 ( COMBINED UNIT OPERATION ( 40 PSI AIR TO A/M32C-10, ) BAR PRESS = .760 M HG  
 ( FAR FIELD NOISE LEVELS ( AC AIR OUTPUT 40 LBS/MIN ) REL HUMID = 70 %  
 ( ) METEOROLOGY:  
 ( ) OMEGA 1.4  
 ( TEST 75-030-001  
 ( RUN 01  
 ( 15 OCT 75  
 ( PAGE 18



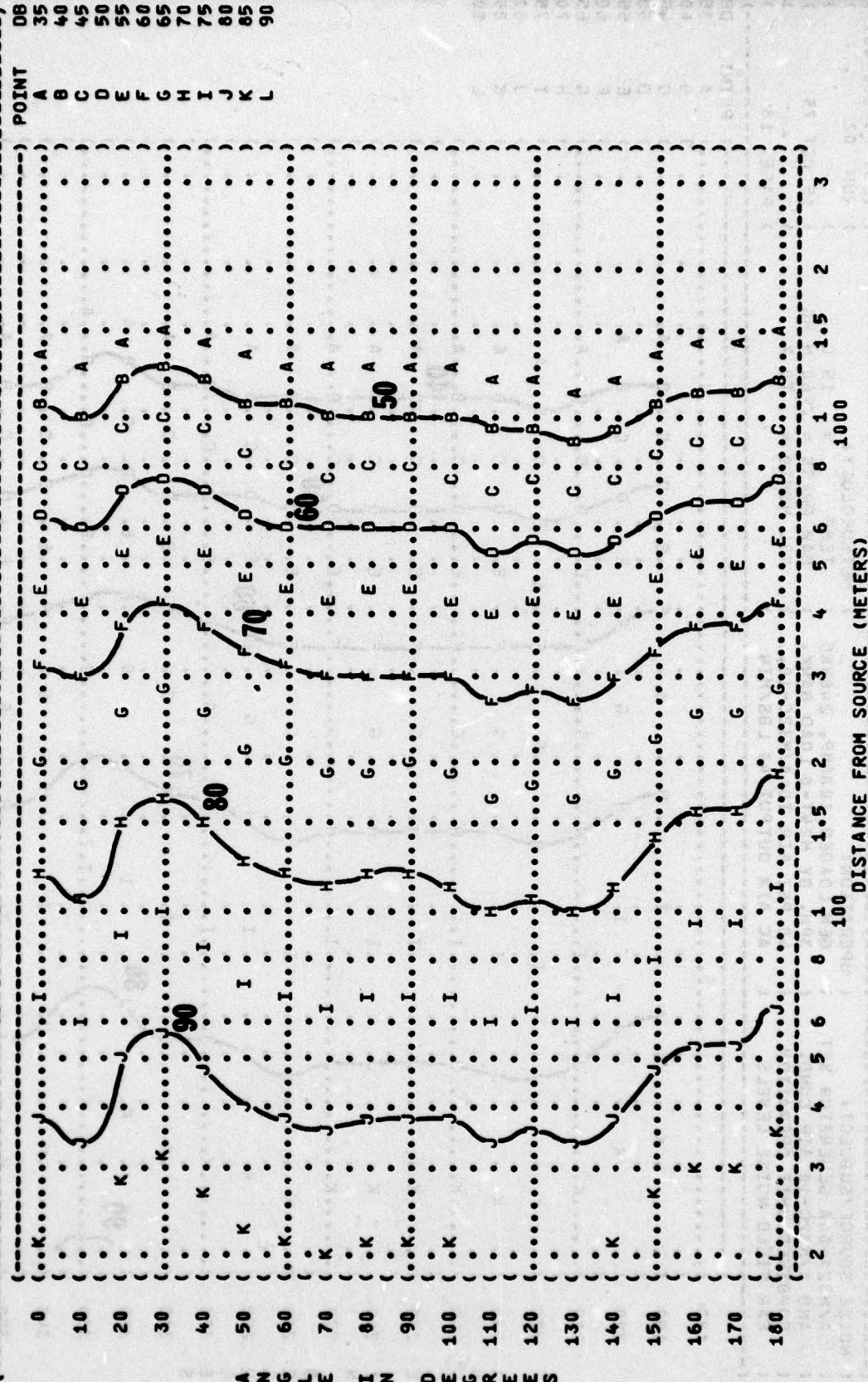
ANGLE IN DEGREES



( ( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( ( 9  
 ( ( EQUAL LEVEL CONTOURS (DB)  
 ( ( 125 HZ OCTAVE BAND  
 ( ( NOISE SOURCE/SUBJECT:  
 ( ( A/M32A-60A GENERATOR SET  
 ( ( AND A/M32C-10 AIR COND.  
 ( ( COMBINED UNIT OPERATION  
 ( ( FAR FIELD NOISE LEVELS  
 ( ( OPERATION:  
 ( ( GEN LOADED 100AMP, 240VAC  
 ( ( 3PH, BY M24T-8 LOAD BANK,  
 ( ( 40 PSI AIR TO A/M32C-10,  
 ( ( AC AIR OUTPUT 40 LBS/MIN  
 ( ( METEOROLOGY:  
 ( ( TEMP = 15 C  
 ( ( BAR PRESS = .760 M HG  
 ( ( REL HUMID = 70 %  
 ( ( IDENTIFICATION:  
 ( ( OMEGA 1.4  
 ( ( TEST 75-030-001  
 ( ( RUN 02  
 ( ( 15 OCT 75  
 ( ( PAGE 18



( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 9 EQUAL LEVEL CONTOURS (DB)  
 ( 250 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT:  
 ( A/M32A-60A GENERATOR SET  
 ( AND A/M32C-10 AIR COND.  
 ( COMBINED UNIT OPERATION  
 ( FAR FIELD NOISE LEVELS  
 ( OPERATION:  
 ( GEN LOADED 100AMP, 240VAC  
 ( 3PH, BY M24T-8 LOAD BANK,  
 ( 40 PSI AIR TO A/M32C-10,  
 ( AC AIR OUTPUT 40 LBS/MIN  
 ( METEOROLOGY:  
 ( TEMP = 15 C  
 ( BAR PRESS = .760 M HG  
 ( REL HUMID = 70 %  
 ( IDENTIFICATION:  
 ( OMEGA 1.4  
 ( TEST 75-030-001  
 ( RUN 01  
 ( 15 OCT 75  
 ( PAGE 19



A N G L E I N D E G R E E S



( FIGURE: SOUND PRESSURE LEVEL {SPL}  
 ( 9  
 ( EQUAL LEVEL CONTOURS (DB)  
 ( 250 HZ OCTAVE BAND  
 ( ) IDENTIFICATION:  
 ( )  
 ( ) OMEGA 1.4  
 ( ) TEST 75-030-001  
 ( ) RUN 02  
 ( )  
 ( NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY:  
 ( A/M32A-60A GENERATOR SET ( GEN LOADED 100AMP, 240VAC ) TEMP = 15 C  
 ( AND A/M32C-10 AIR COND. ( 3PH, BY M24T-8 LOAD BANK, ) BAR PRESS = .760 M HG  
 ( COMBINED UNIT OPERATION ( 40 PSI AIR TO A/M32C-10, ) REL HUMID = 70 %  
 ( FAR FIELD NOISE LEVELS ( AC AIR OUTPUT 40 LBS/MIN )  
 ( ) PAGE 19  
 ( )

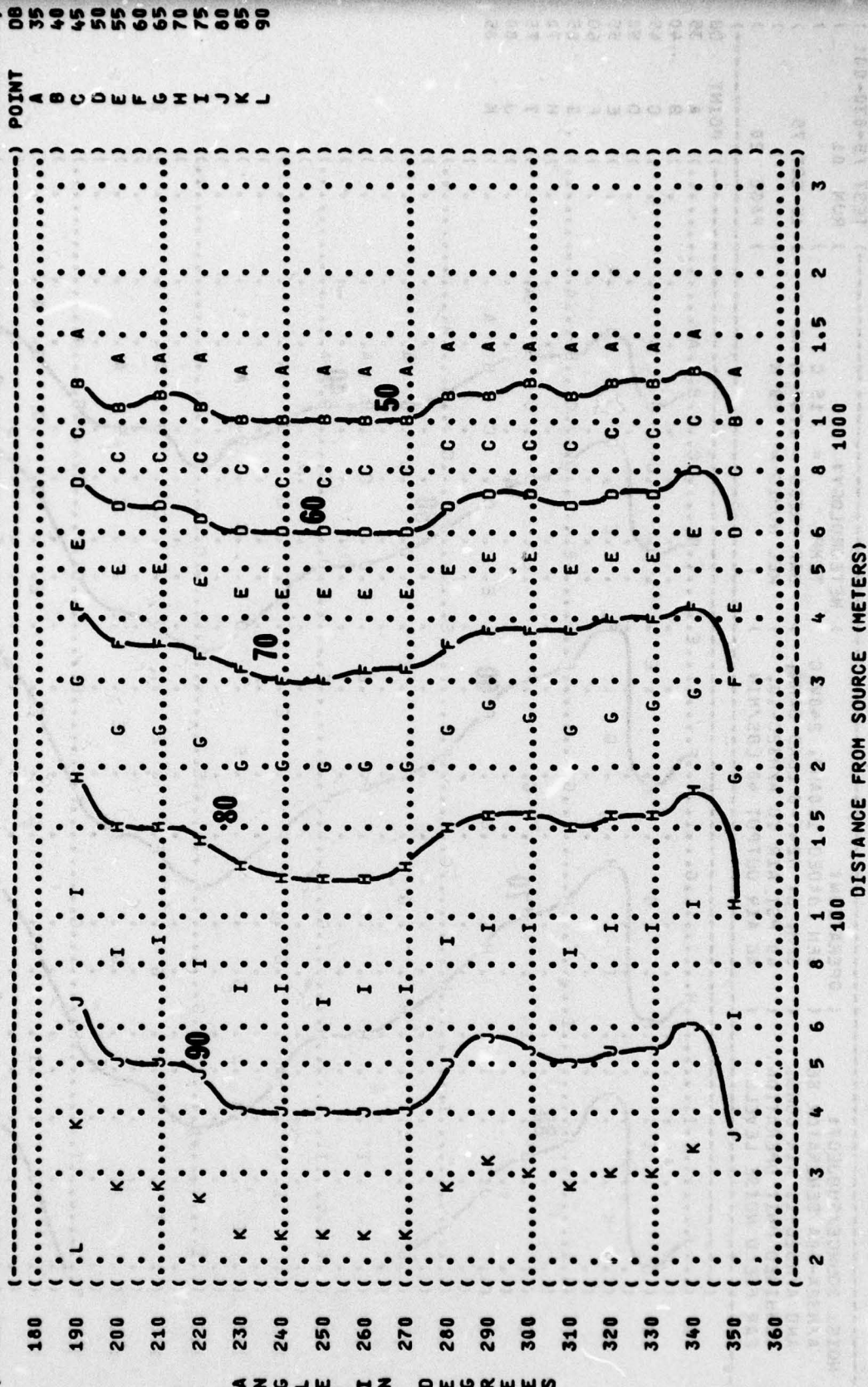


FIGURE: SOUND PRESSURE LEVEL {SPL}  
EQUAL LEVEL CONTOURS (DB)  
500 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:	( OPERATION:	METEOROLOGY:
A/M32A-60A GENERATOR SET	( GEN LOADED 100AMP, 240VAC	TEMP :
AND A/M32C-10 AIR COND.	( 3PH, BY M24T-8 LOAD BANK,	BAR PRESS :
COMBINED UNIT OPERATION	( 40 PSI AIR TO A/M32C-10,	REL HUMID :
FAR FIELD NOISE LEVELS	( AC AIR OUTPUT 40 LBS/MIN	

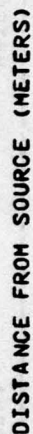
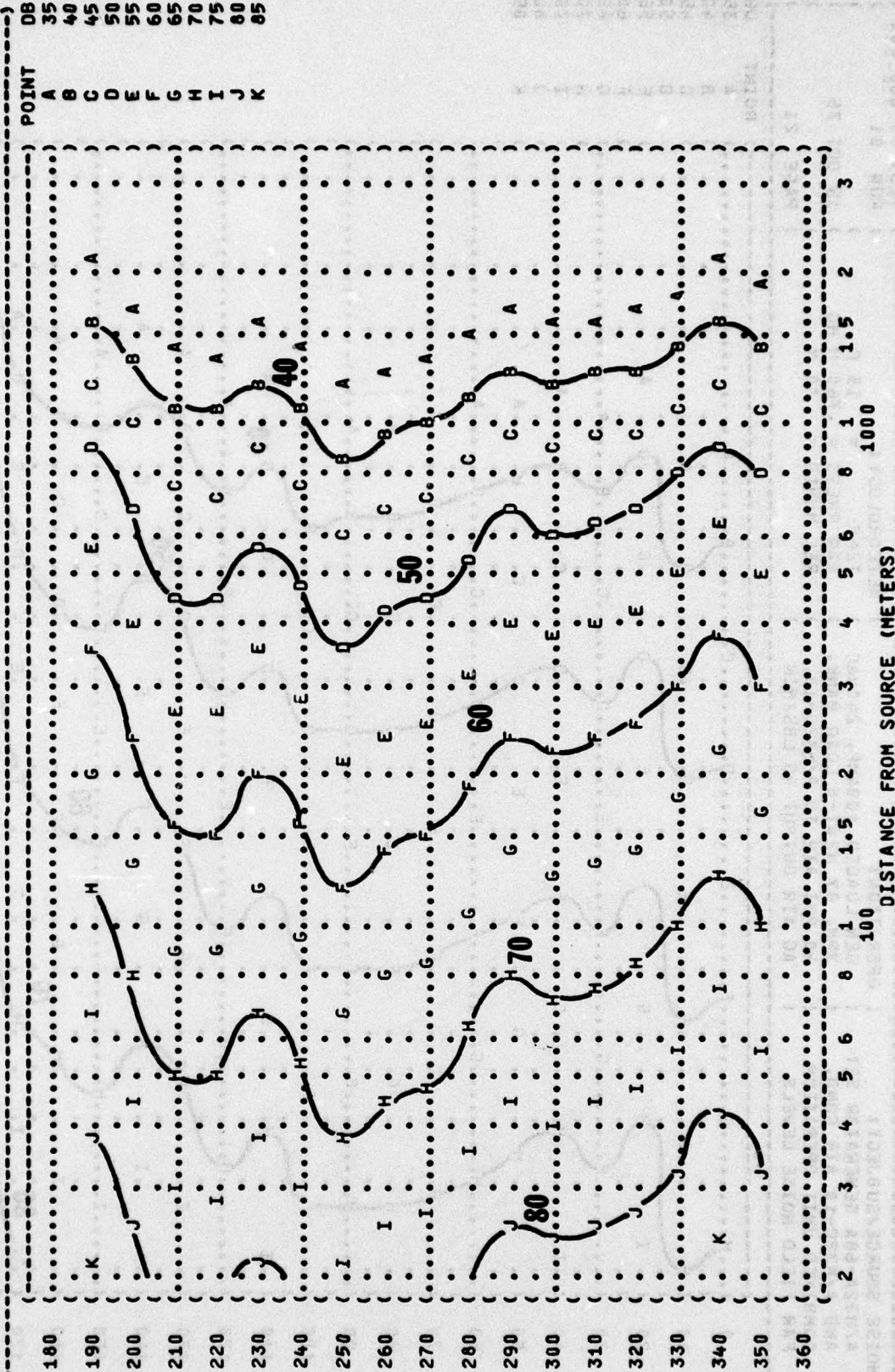




FIGURE: SOUND PRESSURE LEVEL (SPL)  
EQUAL LEVEL CONTOURS (DB)  
500 HZ OCTAVE BAND

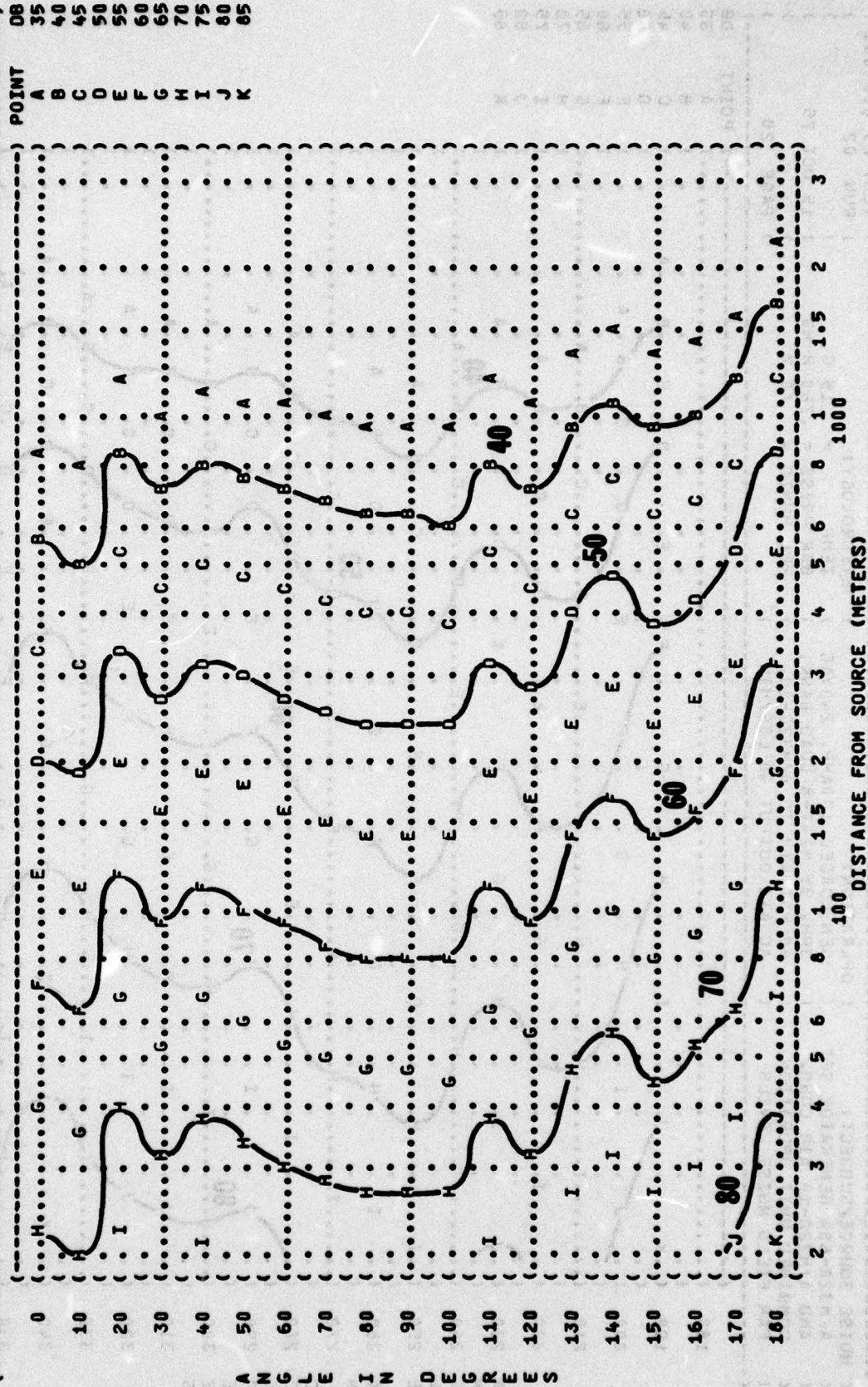
IDENTIFICATION: )  
OMEGA 1.4  
TEST 75-030-001  
RUN 02  
METEOROLOGY: )  
TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %  
OPERATION: )  
GEN LOADED 100AMP, 240VAC  
3PH, BY M24T-8 LOAD BANK,  
40 PSI AIR TO A/M32C-10,  
AC AIR OUTPUT 40 LBS/MIN  
NOISE SOURCE/SUBJECT: )  
A/M32A-60A GENERATOR SET  
AND A/M32C-10 AIR COND.  
COMBINED UNIT OPERATION  
FAR FIELD NOISE LEVELS



DISTANCE FROM SOURCE (METERS)

A N G L E I N D E E R E E S

( FIGURE: SOUND PRESSURE LEVEL (SPL)  
 ( 9 EQUAL LEVEL CONTOURS (DB)  
 ( 1000 HZ OCTAVE BAND  
 ( NOISE SOURCE/SUBJECT: ( OPERATION: ( METEOROLOGY: ( IDENTIFICATION: )  
 ( A/M32A-60A GENERATOR SET ( GEN LOADED 100AMP, 240VAC ( TEMP = 15 C ( OMEGA 1.4  
 ( AND A/M32C-10 AIR COND. ( 3PH, BY M24T-8 LOAD BANK, ( BAR PRESS = .760 M HG ( TEST 75-030-001  
 ( COMBINED UNIT OPERATION ( 40 PSI AIR TO A/M32C-10, ( REL HUMID = 70 % ( RUN 01  
 ( FAR FIELD NOISE LEVELS ( AC AIR OUTPUT 40 LBS/MIN ) PAGE 21 )



A M G L E I N D E G R E E S



**FIGURE 9**  
**SOUND PRESSURE LEVEL {SPL}**  
**EQUAL LEVEL CONTOURS (DB)**  
**1000 HZ OCTAVE BAND**

FIGURE: SOUND PRESSURE LEVEL {SPL}  
EQUAL LEVEL CONTOURS (DB)  
1000 HZ OCTAVE BAND

9

NOISE SOURCE/SUBJECT: ( OPERATION: ) METEOROLOGY: ) IDENTIFICATION:  
A/M32A-600 GENERATOR SET ( GEN LOADED 100AMP, 240VAC ) TEMP = 15 C )  
AND A/M32C-10 AIR COND. ( 3PH, BY M24T-8 LOAD BANK, ) BAR PRESS = .760 M HG )  
COMBINED UNIT OPERATION ( 40 PSI AIR TO A/M32C-10, ) REL HUMID = 70 % )  
FAR FIELD NOISE LEVELS ( AC AIR OUTPUT 40 LBS/MIN ) ) PAGE 21

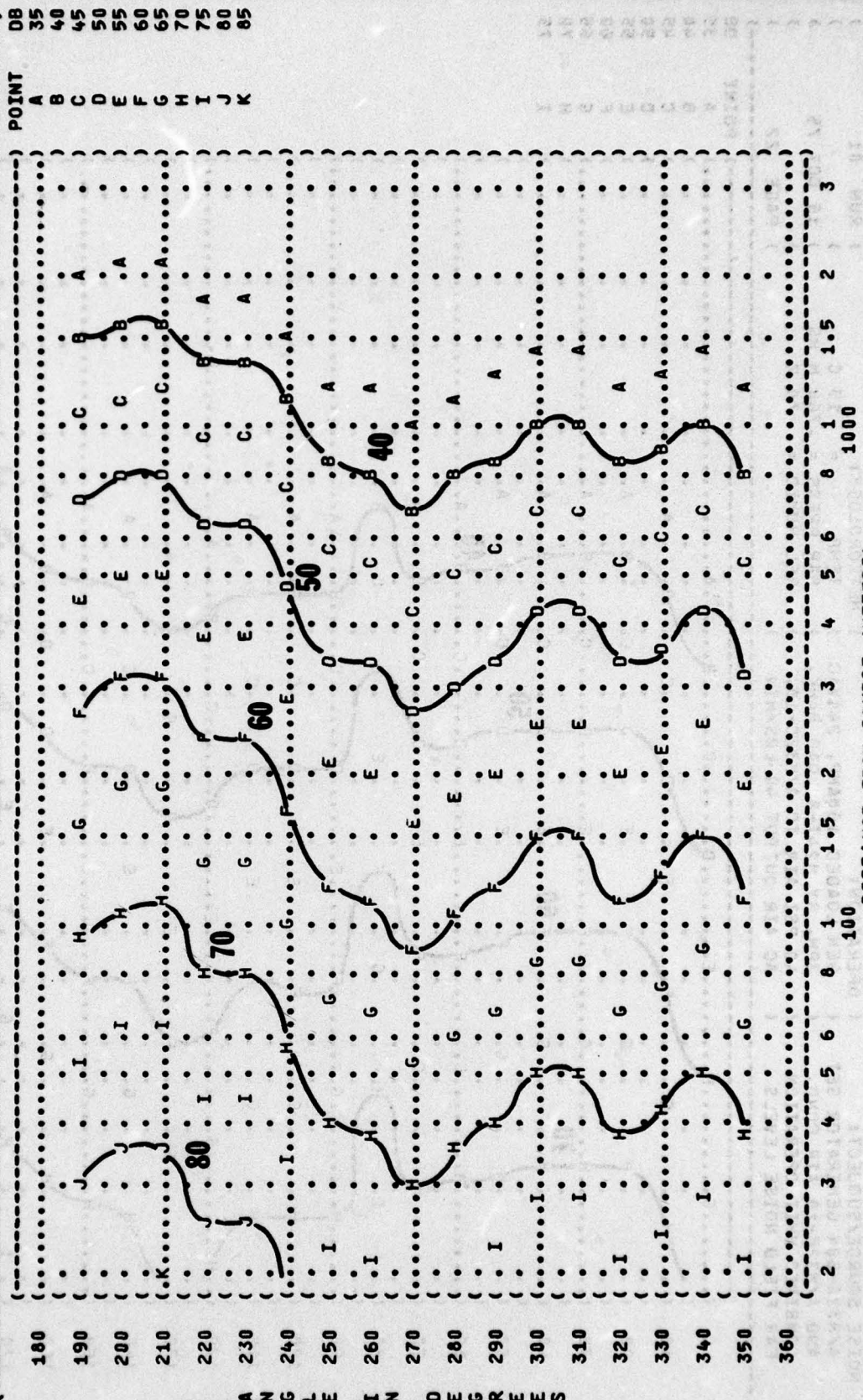


FIGURE 1 SOUND PRESSURE LEVEL (SPL)  
EQUAL LEVEL CONTOURS (DB)  
2000 HZ OCTAVE BAND

IDENTIFICATION:  
OMEGA 1.4  
TEST 75-030-001  
RUN 01  
15 OCT 75  
PAGE 22

METEOROLOGY:  
TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %

OPERATION:  
GEN LOADED 100AMP, 240VAC  
3PH, BY M24T-8 LOAD BANK,  
40 PSI AIR TO A/M32C-10,  
AC AIR OUTPUT 40 LBS/MIN

NOISE SOURCE/SUBJECT:  
A/M32A-60A GENERATOR SET  
AND A/M32C-10 AIR COND.  
COMBINED UNIT OPERATION  
FAR FIELD NOISE LEVELS

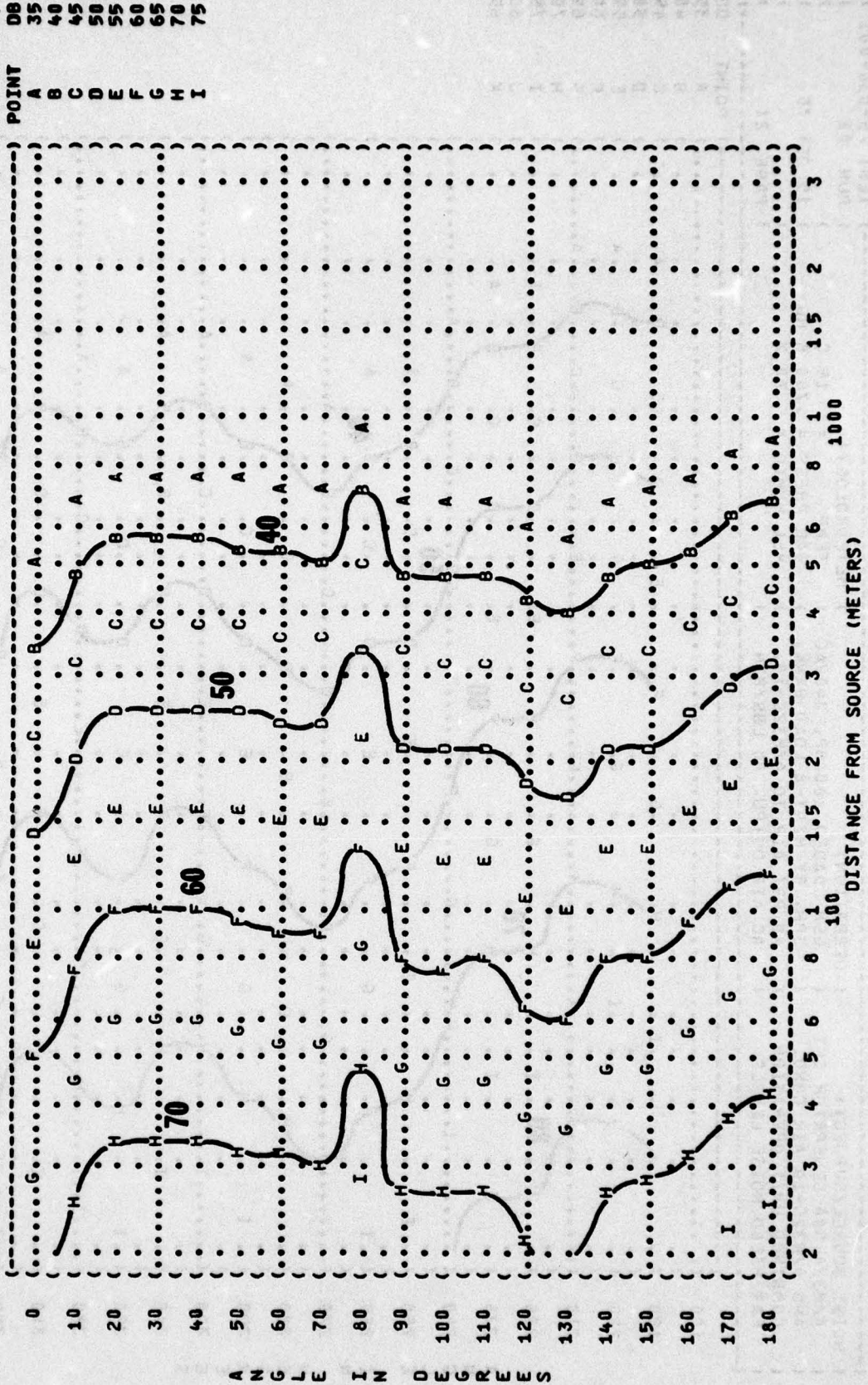




FIGURE: SOUND PRESSURE LEVEL (SPL)  
EQUAL LEVEL CONTOURS (DB)  
2000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT: ( OPERATION: )  
A/M32A-60A GENERATOR SET ( GEN LOADED 100AMP, 240VAC )  
AND A/M32C-10 AIR COND. ( 3PH, BY M24T-8 LOAD BANK, )  
COMBINED UNIT OPERATION ( 40 PSI AIR TO A/M32C-10, )  
FAR FIELD NOISE LEVELS ( AC AIR OUTPUT 40 LBS/MIN )

METEOROLOGY: ( )  
TEMP = 15 C  
BAR PRESS = .760 M HG  
REL HUMID = 70 %

IDENTIFICATION: ( )  
OMEGA 1.4  
TEST 75-030-001  
RUN 02  
15 OCT 75  
PAGE 22

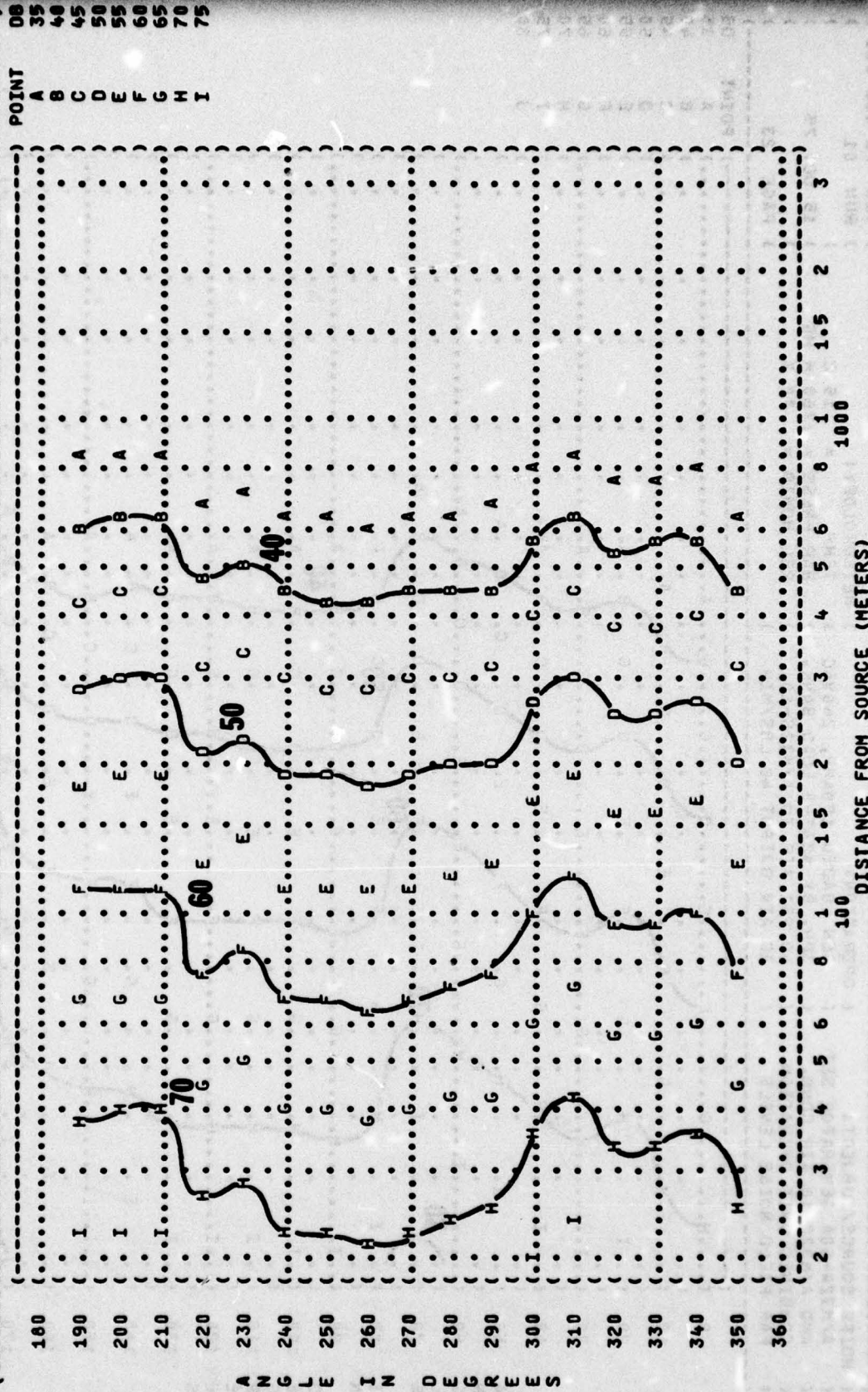


FIGURE: SOUND PRESSURE LEVEL (SPL)  
 EQUAL LEVEL CONTOURS (DB)  
 4000 HZ OCTAVE BAND

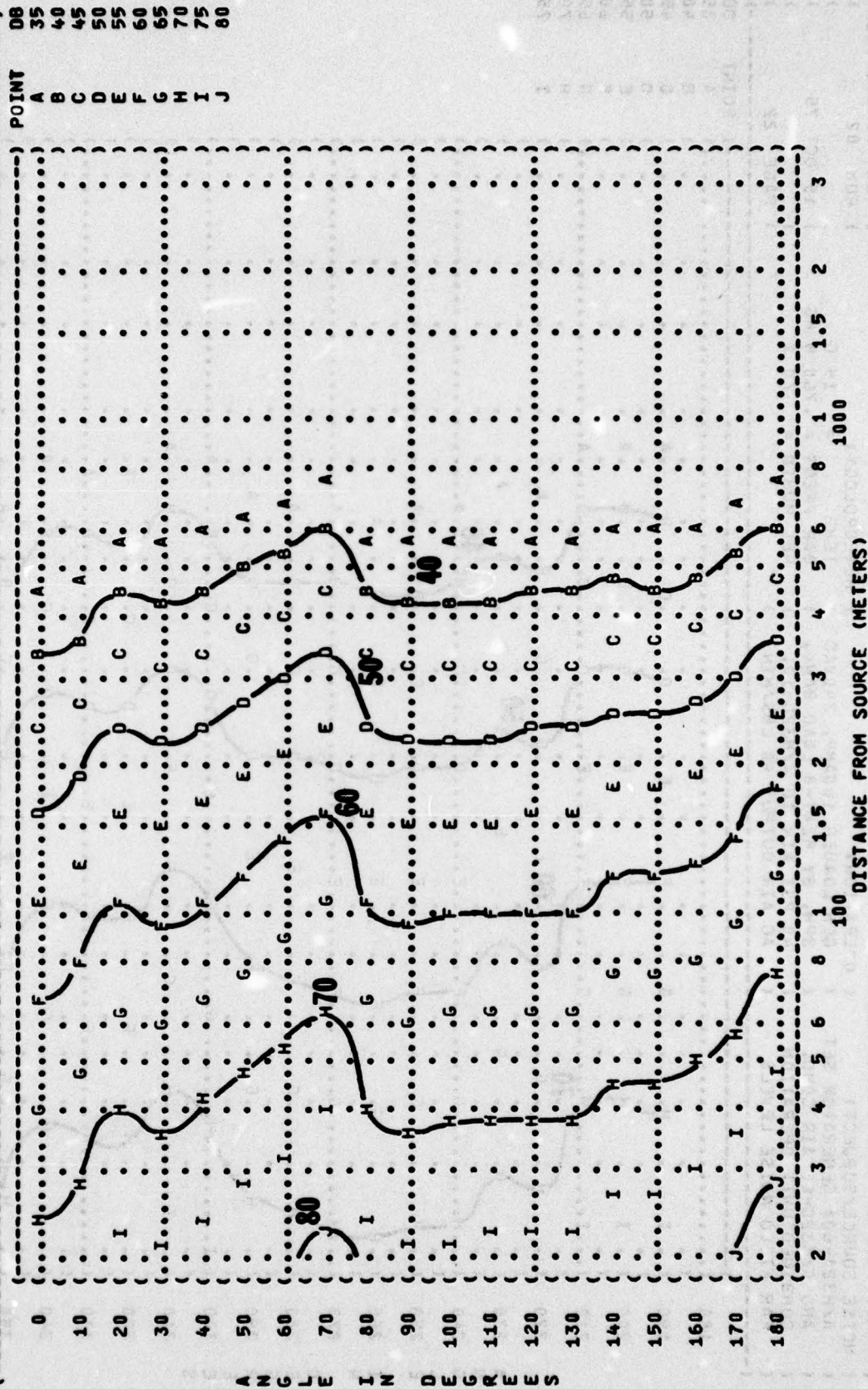
IDENTIFICATION:  
 OMEGA 1.4  
 TEST 75-030-001  
 RUN 01

NOISE SOURCE/SUBJECT:  
 A/M32A-60A GENERATOR SET  
 AND A/M32C-10 AIR COND.  
 COMBINED UNIT OPERATION  
 FAR FIELD NOISE LEVELS

OPERATION:  
 GEN LOADED 100AMP, 240VAC  
 3PH, BY M24T-8 LOAD BANK,  
 40 PSI AIR TO A/M32C-10,  
 AC AIR OUTPUT 40 LBS/MIN

METEOROLOGY:  
 TEMP = 15 C  
 BAR PRESS = .760 M HG  
 REL HUMID = 70 %

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**FIGURE 9** SOUND PRESSURE LEVEL {SPL} EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

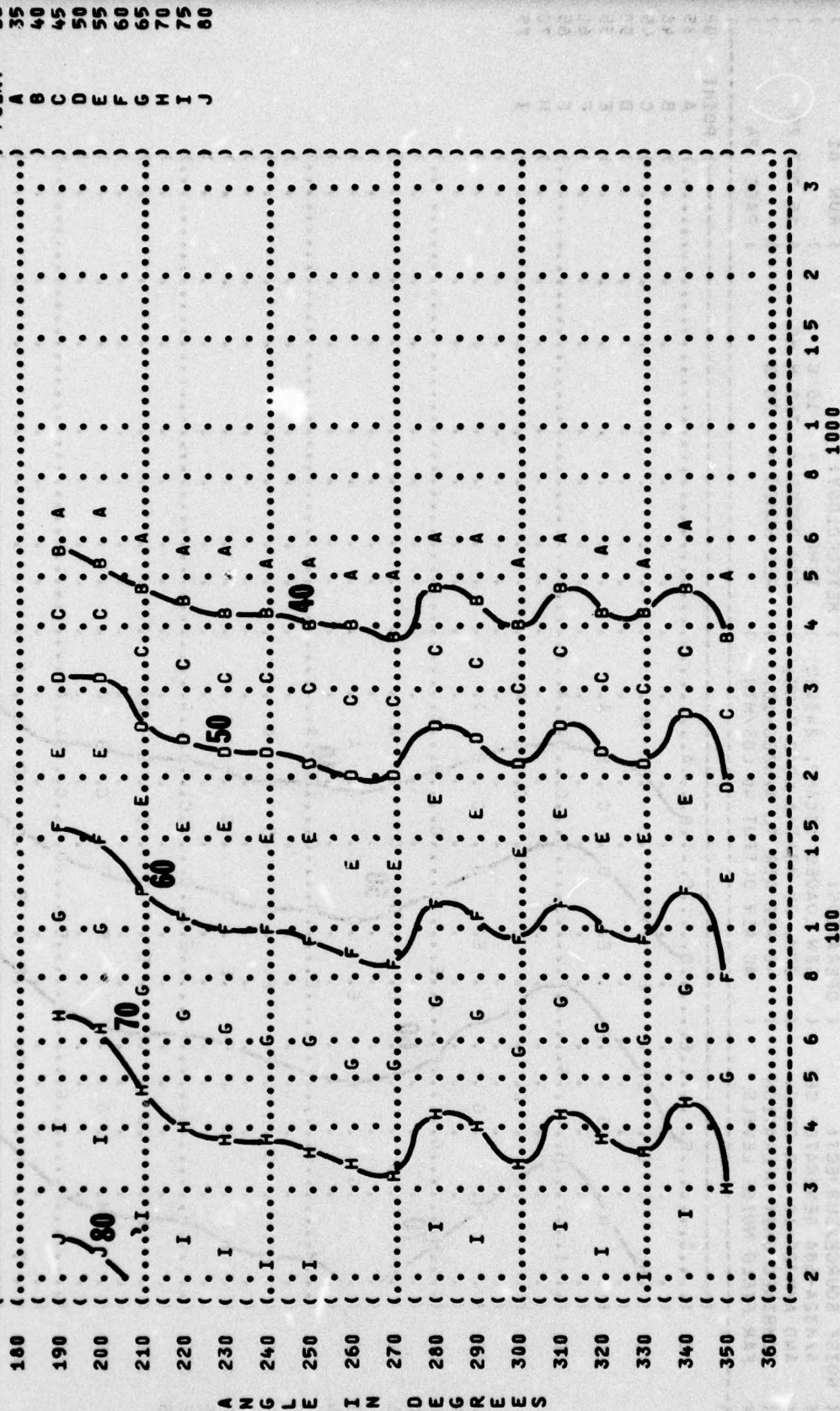
IDENTIFICATION:  
OMEGA 1.4  
TEST 75-030-001

NOISE SOURCE/SUBJECT: A/M32A-60A GENERATOR SET AND A/M32C-10 AIR COND. COMBINED UNIT OPERATION FAR FIELD NOISE LEVELS

( OPERATION: ( GEN LOADED 100AMP, 24.0VAC ( 3PH, BY M24T-8 LOAD BANK, ( 40 PSI AIR TO A/M32C-10, ( AC AIR OUTPUT 40 LBS/MIN )

METEOROLOGY: TEMP = 15 C BAR PRESS = .760 M HG REL HUMID = 70 %

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**FIGURE 9** SOUND PRESSURE LEVEL {SPL} EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

IDENTIFICATION:  
OMEGA 1.4  
TEST 75-030-001

NOISE SOURCE/SUBJECT:	( OPERATION:	) METEOROLOGY:
A/M32A-60A GENERATOR SET	( GEN LOADED 100AMP, 240VAC	) TEMP = 15 C
AND A/M32C-10 AIR COND.	( 3PH, 3Y M24T-8 LOAD BANK,	) BAR PRESS = .760 H HG
COMBINED UNIT OPERATION	( 40 PSI AIR TO A/M32C-10,	) REL HUMID = 70 %
FAR FIELD NOISE LEVELS	( AC AIR OUTPUT 40 LBS/MIN	)

## METEOROLOGY:

•

75

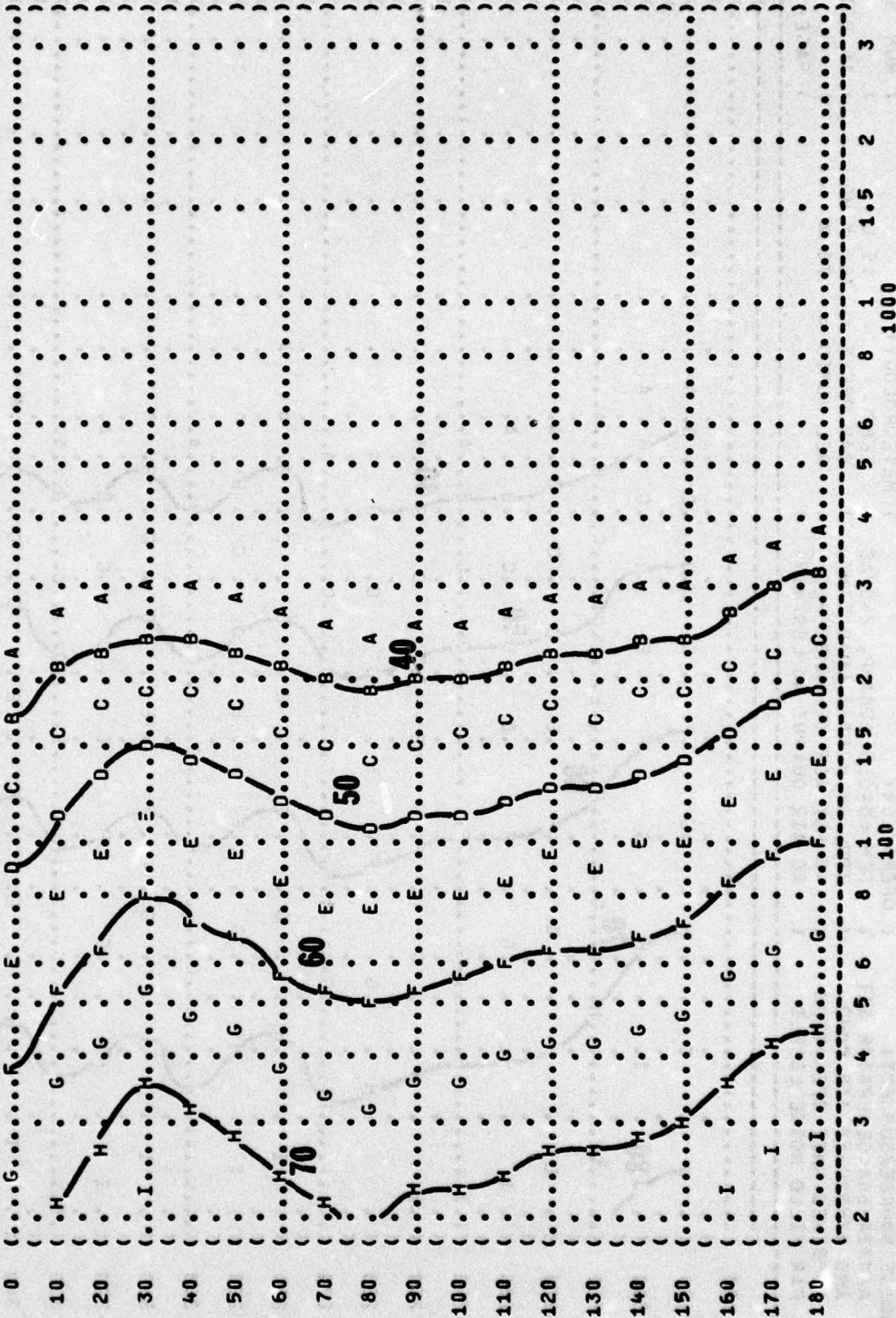
1

24

10

**POINT**

A	B	C	D	E	F	G	H	I
35	40	45	50	55	60	65	70	75



ANGLE IN DEGREES



